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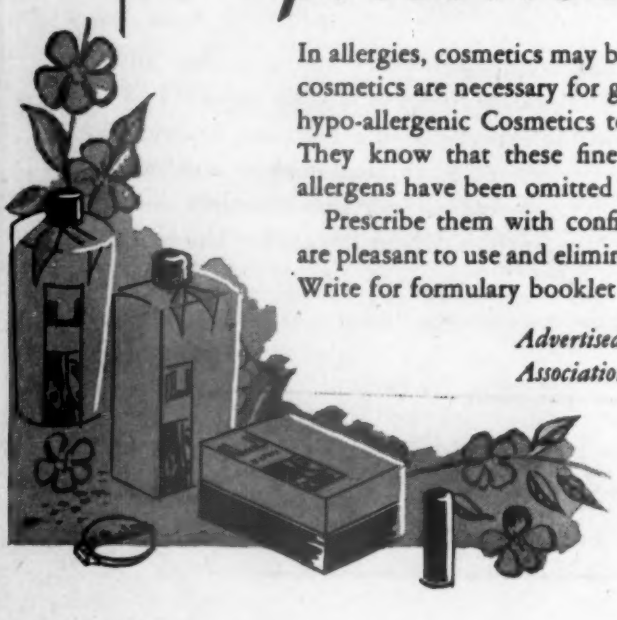

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LATENT RHEUMATIC MYOCARDITIS*

JOSEPH ROGERS, M.D.,† AND STANLEY L. ROBBINS, M.D.‡

BOSTON

RHEUMATIC fever, a systemic disease affecting chiefly the heart, has always been considered to be primarily a disorder of childhood with a markedly diminished incidence of initial and recurrent attacks after puberty.[1, 2] At the younger age levels rheumatic fever follows a variable but usually recognizable pattern, with carditis, arthralgia, chorea and subcutaneous nodules as major manifestations and with fever, abdominal pains, skin rashes, epistaxis and changes in the electrocardiogram, sedimentation rate and white-cell count as minor manifestations of the disease.[3]

It is also appreciated, however, that all these features may be absent in any individual case and that characteristic signs of rheumatic valvular disease may be found in persons from whom no previous history of rheumatic fever can be elicited. In children, the only manifestation of recurrent acute rheumatic carditis is frequently the insidious onset of right-sided cardiac failure, the nature of which has been described by Walsh and Sprague.[4]

Less well known, however, is the fact that initial as well as recurrent acute attacks of rheumatic carditis occur in the later years of life, and at these age levels they may arise in the complete absence of characteristic clinical signs, progressing insidiously into acute cardiac decompensation and death.

It is therefore not uncommon for the activity of these processes — more specifically, the myocarditis component — to be completely unsuspected during the life of older patients. Usually, these cases are considered to be instances of cardiac decompensation arising out of the mechanical impairment of the normal valvular function incurred in earlier attacks of rheumatic carditis.

Many reasons exist for the frequency of acute rheumatic myocarditis as a clinically unsuspected entity in older age groups, the most important of which, perhaps, is the lack of widespread appreciation of the significance of acute rheumatic myocarditis as a fundamental cause of cardiac decompensation in the rheumatic state. Although the point is still a moot one, a number of authors[5–7] agree that the factor precipitating cardiac failure in patients with old rheumatic heart disease is often a reactivation of the rheumatic myocarditis. Rothschild, Kugel and Gross,[5] who have directed attention to this point, make the following observation: "While the causal relationship of active myocarditis to circulatory failure is very striking in the first two decades of life, it is not sufficiently appreciated that in cases of rheumatic heart disease in adults of the third, fourth and fifth decades of life a recurrent rheumatic myocarditis rather than the healed mechanical defects may in the majority of instances be the precipitating cause of circulatory failure." They also point out that a number of patients who have had rheumatic heart disease that has become completely quiescent reach the fifth, sixth, seventh and even the eighth decades of life and ultimately die of a totally unrelated disease without any evidence during life of myocardial failure directly attributable to the mechanical defects of old rheumatic infection.

Another reason for the failure to recognize acute rheumatic myocarditis as a clinical entity *in adults* is the comparative infrequency with which active rheumatic carditis produces decompensation compared to hypertension, arteriosclerosis and inactive rheumatic heart disease. Only an acute awareness of its possible occurrence will permit its recognition. Finally, in many cases, the disease is completely asymptomatic, and no diagnosis is possible short of anatomic investigation of the heart.

Attention having been directed to several cases of active rheumatic carditis in which the correct diagnosis was not made clinically, a study was made of all the cases of acute rheumatic myocarditis coming to autopsy at the Mallory Institute of Pathology of the Boston City Hospital from 1933 to 1946.

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Specifically, it was desired to determine how often patients with known rheumatic heart disease considered to be inactive clinically are found to have active cardiac disease at autopsy; how often acute rheumatic fever occurs as a true latent disease — that is, in the absence of the usual clinical manifestations of activity; what factors, in retrospect, might have contributed to a more accurate diagnosis of active rheumatic disease; and how frequently rheumatic myocarditis occurs without evidence of associated rheumatic valvular or pericardial disease.

Selection of Cases

The microscopical sections in all cases listed as active rheumatic myocarditis at the Mallory Institute of Pathology in the thirteen-year period from 1933 to 1946, together with the autopsy protocols, were reviewed to obtain a series of proved cases of active rheumatic myocarditis. Cases of superimposed acute or subacute bacterial endocarditis were eliminated because of the possibility that the Aschoff bodies were related to the endocardial bacterial infection.[8, 9] Forty-one cases were demonstrated to have characteristic Aschoff bodies in the

Table 1. *Cases Diagnosed Clinically as Active Rheumatic Heart Disease Confirmed by Autopsy (Group I).*

Patient	Sex	Age	Previous Attack	Previous Cardiac Failure	Infection	Joint Manifestations	Physical Findings			
							Pericarditis	Murmurs	Congestive Failure	Highest Temperature °F
		yr.								
M. A.	M	16	0	0	Sore throat	Polyarthritis	+	Aortic systolic	+	103.4
A. P.	M	53	1	0	Upper respiratory infection	Pains	+	Aortic systolic, aortic diastolic and mitral diastolic	+	100.0
R. R.	M	2	0	0	Sore throat	Pains	+	Aortic systolic, mitral systolic and mitral diastolic	+	103.0
M. S.	F	13	1	0	Unknown	0	+	Mitral systolic and mitral diastolic	+	104.0
A. H.	F	7	0	0	Upper respiratory infection; scarlet fever.	Polyarthritis	+	Mitral systolic and mitral diastolic	+	102.0
R. W.	M	7	0	0	Sore throat	Shoulder pain	+	Mitral systolic	+	103.0
L. N.	M	50	3	0	Sore throat	Polyarticular arthritis	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	0	101.6
W. W.	M	14	2	0	Upper respiratory infection; sore throat.	Pains	+	Mitral systolic and mitral diastolic	+	103.0
J. N.	M	6	1	0	Bronchopneumonia	0	+	Aortic diastolic, mitral systolic and mitral diastolic	+	104.0
G. C.	M	9	1	0	—	Pains	+	Mitral systolic and mitral diastolic	+	102.0
J. S.	M	14	1	0	Upper respiratory infection	0	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	103.0
T. C.	M	15	—	0	—	0	+	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	103.0
B. R.	M	15	Several	0	Upper respiratory infection	0	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	101.0
J. A.	M	14	Several	0	Sore throat	Polyarthritis	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	103.0
S. D.	M	49	1	0	None	Polyarthritis	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	102.0
B. M.	M	15	0	0	None	Polyarthritis	0	Mitral systolic and mitral diastolic	+	101.0
K. K.	F	13	Chorea	0	Sore throat	Polyarthritis	+	Aortic systolic, mitral systolic and mitral diastolic	0	102.0
B.O.	F	4	0	0	Scarlet fever; measles.	Polyarthritis	+	Systolic over precordium and mitral systolic	+	103.0
T. S.	M	30	1	+	Upper respiratory infection; sore throat.	Pains	+	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	100.0
E. E.	F	5	0	0	Scarlet fever	Polyarthritis	0	Mitral systolic and mitral diastolic	+	105.0

myocardium and were available for study. On review of the clinical records, it became apparent that cases of rheumatic myocarditis could be divided into four groups.

Group I comprised 20 cases in which the clinical and pathological diagnoses of active rheumatic fever were in agreement. These cases represent the active clinical process in an obviously recognizable form and are included as a basis for comparison with the following groups.

Group II was composed of 10 cases that clinically were labeled inactive rheumatic heart disease but at post-mortem examination were found to have active rheumatic myocarditis as evidenced by the presence of Aschoff bodies in the myocardium, in addition to the characteristic rheumatic valvular deformity.

Group III included 7 cases in which no diagnosis of rheumatic heart disease, active or inactive, was made from the history, physical examination or clinical course but in which autopsy showed both myocarditis and characteristic rheumatic valvular deformity.

Group IV was made up of 4 cases in which no evidence of rheumatic heart disease was observed

TABLE 1 (*Continued*).

PATIENT	LABORATORY FINDINGS				AUTOPSY FINDINGS		PRINCIPAL ANATOMIC DIAGNOSIS
	SEDIMENTATION RATE	WHITE-CELL COUNT $\times 10^3$	PR INTERVAL	PERICARDITIS	MYOCARDIAL ASCHOFF BODIES	VALVULITIS	
M. A.	Normal	23–38	Upper limit of normal	Fibrinous	Acute cellular	Acute mitral and aortic	Pneumonia, lobular; rheumatic heart disease, acute, decompensated.
A. P.	–	18	Upper limit of normal	Fibrinous	Acute cellular	Acute mitral	Rheumatic heart disease, acute, decompensated
R. R.	–	20	—	Serous	Acute cellular	Old healed mitral	Rheumatic heart disease, old and acute, decompensated
M. S.	–	18–32	Normal	Fibro-fibrinous	Acute cellular	Healed mitral and aortic with superimposed acute mitral	Rheumatic heart disease, old and acute, decompensated
A. H.	+	12–25	—	Sero-fibrinous	Acute cellular	Old mitral	Rheumatic heart disease, old and acute, decompensated
R. W.	Normal to +++	11–16	Prolonged	Slight fibrinous	? Early	Old mitral	Rheumatic heart disease, old and acute, decompensated
L. N.	–	15–16	Complete block	—	Acute cellular	Healed and recurrent acute mitral	Bronchopneumonia; rheumatic heart disease, old and acute, decompensated.
W. W.	++ to +++	17	—	—	Acute cellular	Healed, with recurrent, acute mitral	Rheumatic heart disease, old and acute, decompensated
J. N.	–	10–42	—	Fibro-fibrinous	Acute cellular	Acute mitral	Rheumatic heart disease, acute, decompensated
G. C.	–	—	—	Fibrinous	Acute cellular	Healed mitral and aortic, with recurrent acute mitral	Rheumatic heart disease, old and acute, decompensated
J. S.	+	9–11	Prolonged	Fibrinous	Acute cellular	Healed mitral and aortic, with recurrent acute mitral	Rheumatic heart disease, old and acute, decompensated
T. C.	+++	17–25	Upper limit of normal	Sero-fibrinous	Acute cellular	Acute mitral	Rheumatic heart disease, acute, decompensated
B. R.	Normal	19	Typical of auricular fibrillation	Fibrous obliterative	Acute cellular	Healed mitral, aortic and tricuspid	Rheumatic heart disease, old and acute, decompensated; pulmonary tuberculosis, minimal.
J. A.	Normal to ++	12	Upper limit of normal	Fibrous obliterative	Acute cellular	Healed mitral and aortic	Rheumatic heart disease, old and acute, decompensated
S. D.	–	14	Prolonged	Sero-fibrinous	Acute cellular	Healed recurrent acute mitral and aortic	Rheumatic heart disease old and acute, decompensated
B. M.	Normal to ++	18–19	—	Fibro-fibrinous	Acute cellular	Healed mitral	Bronchopneumonia; rheumatic heart disease; old and acute, decompensated.
K. K.	++	13–23	—	Fibrinous	Acute cellular	Healed recurrent acute mitral	Rheumatic heart disease, old and acute, decompensated
B. O.	–	9–18	Prolonged	Fibro-fibrinous	Acute cellular	Healed recurrent acute mitral	Rheumatic heart disease, old and acute, decompensated
T. S.	++	5–18	Prolonged	Serous	Acellular; ? healing.	Healed mitral, aortic and tricuspid, with mitral	Rheumatic heart disease, old and acute, decompensated
E. E.	–	12–18	—	—	Acute cellular	Acute mitral and aortic	Rheumatic heart disease, acute, decompensated

during life but in which post-mortem examination revealed acute rheumatic myocarditis without any associated valvular deformity or pericardial involvement.

Clinical and Post-Mortem Data

The average age of the 41 cases was thirty-three years, with a range from two to sixty-three years. Only 3 patients were Negroes. There were 25 male and 16 female patients. Each of the four groups is considered individually below.

Table 2. *Cases Diagnosed Clinically as Inactive Rheumatic Heart Disease but Found to be Active at Autopsy (Group II).*

Patient	Sex	Age	Previous Attack	Previous Cardiac Failure	Infection	Joint Manifestations	Physical Findings			
							Pericarditis	Murmurs	Congestive Failure	Highest Temperature °F.
		yr.								
J. M.	M	36	3	Several	Upper respiratory infection	No pains for 6 years	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	98.6
J. C.	M	28	1	0	0	Pains since age of 12; swollen, tender ankles.	0 ? rub	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	104.0
A. R.	F	49	5	Several	0	No pains for 1½ years	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	101.0
J. D.	M	54	1	Several	0	None	0	Aortic systolic, mitral systolic and mitral diastolic	+	98.6
M. P.	F	38	2	1	0	None	0	Aortic systolic, mitral systolic and mitral diastolic	+	98.6
A. C.	F	39	0	0	0	None	0	Mitral systolic and mitral diastolic	+	103.0
C. M.	M	12	3	0	Upper respiratory infection	Pains in elbows	0	Aortic diastolic, mitral systolic and mitral diastolic	+	104.0
E. B.	F	42	1	0	0	None	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	99.0
M. S.	F	45	1	0	Upper respiratory infections	Pains	0	Aortic systolic, aortic diastolic, mitral systolic and mitral diastolic	+	106.0 (terminal)
J. L.	M	63	1	1	0	Joint pains	0	Aortic systolic, mitral systolic and mitral diastolic	+	102.0

Group I

In Group I the average age was eighteen years, with a range from two to fifty-three years (Table 1). It is significant that only 5 patients were over fifteen years of age.

Eleven patients had had at least one previous episode of rheumatic fever. Sore throat, upper respiratory infection or scarlet fever preceding the rheumatic episode was a prominent feature, being present in 14 cases. Two patients had had no preceding infection, and in 3 cases the record did not indicate whether or not there had been a previous infection. Joint pains or actual polyarthritis was prominent, being found in all but 5 cases. Four patients complained of abdominal pain. Thirteen patients had presented evidence of pericardial involvement, manifested either by the presence of a friction rub or by actual pericardial effusion. Although not recorded in Table 1, a forceful heaving cardiac apical impulse was common. All but 2 patients had congestive failure, and all had fever. Elevated sedimentation rates were found in all but 2 of the 11 cases in which the test was performed. White-cell counts were consistently elevated, and electrocardiograms taken on 12 patients showed PR intervals in the upper limits of normal in 4 and prolonged in 5. In short, the clinical evidence was sufficient to permit recognition of rheumatic activity.

At autopsy all the hearts of the patients in Group I, in addition to active myocarditis, showed either old healed rheumatic valvular deformities or acute rheumatic endocarditis, or both. In 8 cases an acute valvulitis was superimposed on an earlier healed process. In every case there was definite anatomic evidence of cardiac decompensation, which was considered to be the cause of death in all but 1.

Group II

In Group II the average age was forty-one years, with a range from twelve to sixty-three years (Table 2). It is significant to note that on the average these patients were twenty-three years

older than those in Group I. Previous episodes of rheumatic fever were noted in all but 2 cases in Group II. Five patients had had episodes of congestive failure. In contrast to the frequency of sore throats or upper respiratory infection in Group I, only 3 cases in this group presented evidence of such preceding infections. Joint phenomena were also less striking, only 3 of the 10 patients complaining of recent joint pains. One patient had complained of pains for the previous twelve years. Two patients had had no joint pains for several months, and in the remaining 4 cases joint pains were not mentioned. Typical polyarthritis was not observed in any of these cases. Signs of pericarditis, which were common in Group I, were absent in Group II except in a case in which there was a question of a friction rub. All the patients in this group had murmurs characteristic of valvular damage, and all had congestive failure. The temperatures were normal in 4 cases, and in only 4 cases was there rise to over 101°F. Sedimentation rates were determined in only 4 cases and were elevated in 3. The white-cell counts were in general lower than those in the group clinically diagnosed as active. Electrocardiograms were recorded in 8 cases. The PR interval was prolonged in 2 and normal in 2 cases. Three patients were fibrillating, and 1 had complete block.

From the pathological point of view autopsy demonstrated the classic lesions of rheumatic heart disease in all cases. In addition to the active myocarditis, all the hearts presented typical healed aortic or mitral valvulitis, or both, with stenosis. In 2 cases with old healed valvular deformities a superimposed recurrent acute rheumatic endocarditis was demonstrated by pinpoint fibrinous vegetations along the free margins of the mitral valve. In 9 patients the death was attributable to the decompensated rheumatic carditis. The remaining patient died of a cerebrovascular accident with signs of cardiac decompensation at autopsy.

TABLE 2 (*Continued*).

PATIENT	LABORATORY FINDINGS			AUTOPSY FINDINGS			PRINCIPAL ANATOMIC DIAGNOSIS
	SEDIMENTATION RATE	WHITE-CELL COUNT $\times 10^3$	PR INTERVAL	PERICARDITIS	MYOCARDIAL ASCHOFF BODIES	VALVULITIS	
J. M.	–	6	Normal	Fibrous obliterative	Acute cellular	Healed aortic	Rheumatic heart disease decompensated; syphilitic aortitis.
J. C.	+	7–30	Prolonged	None	Acute cellular	Healed mitral and aortic	Rheumatic heart disease, old and recurrent, acute, decompensated; infectious polyneuritis.
A. R.	–	8–10	Prolonged	Sero-fibrinous	Acute cellular	Healed mitral and aortic	Rheumatic heart disease, old and recurrent, acute, decompensated
J. D.	–	—	—	Fibrinous	Acellular	Healed mitral and aortic	Rheumatic heart disease, old and recurrent, acute, decompensated
M. P.	Normal	12–18	Typical of auricular fibrillation	None	Acute cellular	Healed mitral	Cerebral hemorrhage; pulmonary embolus; rheumatic heart disease, decompensated.
A. C.	Normal +	7–32	Normal	None	Acute cellular	Healed mitral and aortic	Rheumatic heart disease, old and recurrent, acute decompensated; pulmonary embolus, small.
C. M.	+++	9–18	—	Fibrous obliterative	Acute cellular	Healed with recurrent acute mitral	Rheumatic heart disease old and recurrent, acute, decompensated
E. B.	–	15–17	Typical of auricular fibrillation	None	Acute cellular	Healed mitral and aortic	Rheumatic heart disease, old and acute, decompensated
M. S.	–	8–11	Typical of complete block	Fibrous obliterative	Acute cellular	Healed mitral	Rheumatic heart disease, old and acute, decompensated
J. L.	–	8–14	Typical of auricular fibrillation	Fibrous focal	Acute cellular	Healed and acute mitral and aortic; healed tricuspid.	Rheumatic heart disease, old and acute, decompensated

Group III

The average age of the patients in Group III was fifty-five years, with a range of twenty-nine to sixty-three — an average of seventeen years older than the patients in Group II and thirty-seven years older than those in Group I. All but 2 patients in Group III were over fifty-nine years of age. The histories had no significant points in common, and such factors as sore throat and joint phenomena were not present except in 1 case (Table 3). Pericarditis was absent in 6 cases. In only 1 case was there any cardiac murmur suggestive of rheumatic disease. Three patients had given clinical evidence of congestive failure, which was attributed in

TABLE 3. *Cases of Acute Rheumatic Carditis with Myocardial and Valvular Involvement Not Diagnosed Clinically as Rheumatic Heart Disease (Group III).*

Patient	Sex	Age	History	Physical Findings			Laboratory Findings		Clinical Diagnosis	Autopsy Findings			Principal Anatomic Diagnosis
				Pericarditis	Murmurs	Congestive failure	Highest temperature °F.	White-cell count x 10^3	PR interval		Pericarditis	Myocardial Aschoff bodies	Valvulitis	
V. B.	F	59 yr.	Weakness, mental changes and coma	0	Aortic systolic and aortic diastolic	+	102.0	18	—	Hypertension; ? cerebral hemorrhage.	Slight serous effusion	Acute cellular	Healed, with superimposed acute mitral	Rheumatic heart disease, old and acute, decompensated
A. C.	M	63	Pain and tenderness, left calf	0	? Mitral diastolic	+	102.0	4–16	—	Thrombophlebitis; lobar pneumonia; congestive failure.	None	Acellular	Healed, with superimposed acute mitral	Massive pulmonary emboli (source, leg veins); rheumatic heart disease, decompensated.
J. I.	M	63	Sudden onset of abdominal pain	0	Aortic systolic	+	99.5	24–27	—	Mesenteric thrombosis; arteriosclerotic heart disease.	Fibrous obliterative	Acellular	Healed mitral and aortic	Mesenteric thrombosis
E. B.	F	29	Known hypertension with intermittent coma for 10 days prior to admission	0	0	0	100.6	10	—	Subarachnoid hemorrhage; hypertension.	None	Rare cellular	Healed mitral and aortic	Rheumatic heart disease old and acute, decompensated
D. G.	F	60	Operative diagnosis of carcinoma of gall bladder 6 months prior to admission	0	Mitral systolic	0	104.0	9–10	—	Carcinomatosis; avitaminosis.	Focal fibrous	Atypical cellular	Healed mitral	Carcinoma of gall bladder, with biliary-tract obstruction
R. H.	F	47	Malaise chest pain, cough, nausea, fever and joint pains for 2 years	+	Systolic, 3rd left interspace	0	101.2	22–60	Prolonged	Bronchopneumonia; adhesive pericarditis.	Serofibrinous	Acute cellular	Acute fibrinous aortic	No anatomic cause of death
F. B.	M	61	Cough; hemoptysis following upper respiratory infection.	0	Mitral systolic	0	101.0	—	—	Pulmonary tuberculosis	Focal fibrous	Early acute	Acute mitral	Pulmonary tuberculosis

TABLE 4. *Cases with Acute Myocarditis, Rheumatic in Type, Not Diagnosed Clinically as Rheumatic Heart Disease (Group IV).*

Patient	Sex	Age	History	Physical Findings			Laboratory Findings				Clinical Diagnosis	Autopsy Findings			Principal Anatomic Diagnosis
				Pericarditis	Murmurs	Congestive failure	Highest temperature °F.	Sedimentation rate	White-cell count x 10^3	PR interval		Pericarditis	Myocardial Aschoff bodies	Valvulitis	
A. E.	F	61 yr.	Left hemiparesis; coma.	0	Mitral systolic	+	105	++	12–14	Normal	Hypertension; hypertensive heart disease; cerebral thrombosis.	None	Cellular with acute necrosis	None	Cerebral encephalomalacia
H. W.	M	52	Congestive failure	0	0	+	98.6	—	6–8	Prolonged	Hypertension; hypertensive heart disease.	Serous effusion	Cellular	None	Cardiac decompensation
C. B.	F	49	Malaise; jaundice.	0	0	0	104	—	9–14	—	Carcinoma, head of pancreas; bronchopneumonia.	None	Acellular	None	Cardiac decompensation with pulmonary congestion and edema; acute yellow atrophy, early, slight.
S. H.	M	62	Cough; weight loss; sore throat.	0	Aortic systolic	0	101	—	18	—	Primary tuberculosis; arteriosclerosis.	Serous effusion	Atypical	None	Pulmonary tuberculosis

2 cases to hypertension, the third being considered arteriosclerosis. It is significant that the sedimentation rates were not determined in any of these patients and that electrocardiograms were taken in only 1 case. The clinical diagnoses in the cases with congestive failure were hypertension and cerebral hemorrhage in 1 case and hypertension with subarachnoidal hemorrhage in another, whereas in a third no etiologic cause of failure was given.

At post-mortem examination the hearts were as characteristic of rheumatic heart disease as those in the preceding two groups. In the myocardium there were numerous Aschoff bodies, which, together with the typical healed valvular deformities, made the diagnosis of rheumatic carditis certain. In several cases the Aschoff bodies appeared to be somewhat acellular, indicating that the process had passed through the peak of its acuteness, but sufficient necrosis persisted to warrant their inclusion with the cases of acute myocarditis. In 2 patients only an acute valvulitis was present, with no evidence of earlier damage. Two cases presented recurrent acute endocarditis superimposed on old valvular damage.

From the anatomic point of view it appears highly likely that 3 of these patients died of cardiac decompensation, the other 4 dying of massive pulmonary embolism, mesenteric thrombosis, pulmonary tuberculosis and adhesive pericarditis respectively.

Group IV

In Group IV the average age, which was fifty-six years, was the same as that in the cases in Group III, with a range of forty-nine to sixty-two years (Table 4).

One patient had had a questionable diastolic murmur, and 2 had had congestive failure. As in Group III the histories disclosed nothing to point to rheumatic disease, and the clinical diagnoses again were such as to show no relation to rheumatic heart disease. The acute myocarditis was associated with acute yellow atrophy of the liver in 1 case and with bilateral advanced tuberculosis in another. Of the remaining 2 patients, 1 died of cardiac decompensation attributed to hypertension, and the other of cerebral encephalomalacia.

Discussion

Of the 41 patients presented, the first group, composed of 20 patients, represented the pathologic process in its familiar clinical form. All the patients except 4 were in the first two decades of life, and they demonstrated at various times during the illness one or more of the typical manifestations. This group serves as a contrast to the other three groups, in which the presence of rheumatic activity was not recognized during life.

The second group of patients, 10 in number, differed from the first group in many respects (Table 5). To begin with, although they were all known to have had rheumatic heart disease and all were in congestive failure, the disease was considered to be inactive at the time of death. The decompensation was thought to be purely on the basis of previous valvular damage, no element of reactivation of the disease being suspected.

Table 5. *Summary of Clinical and Laboratory Data in Two Groups of Cases.*

Group	No. of Cases	Average Age	Cases with Preceding Infection	Cases with Joint Signs or Symptoms	Cases with Pericarditis	Cases with Congestive Failure	Type of Temperature	Cases with Abnormal Sedimentation Rate	White-Cell Counts	Cases with Prolonged PR Interval
		yr.								
I	20	18*	14	15	13	18	High	9†	High	9‡
II	10	41§	3	3	1 (?)	10	Low	2¶	Lower	2‖

*Range of 2 to 53 yr.
†Rate slightly abnormal; determination made in 11 cases.
‡Interval determined in 12 cases.
§Range from 12 to 63 yr.
¶Moderately abnormal; determined in 4 cases.
‖Interval determined in 8 cases.

The question obviously arises why this reactivation of the rheumatic carditis was not recognized clinically. The patients as a group gave almost no history suggestive of activation of the disease. Unlike the earlier recognized attacks, the last one was not ushered in with any striking suggestive features such as polyarthritis and sore throat. Perhaps the factor most largely responsible for the failure to recognize active rheumatic heart disease in this group was the age of the patients. As mentioned above, they were at least twenty years older than those in Group I. In 7 cases it is apparent from the clinical records that active infection was not considered to be sufficiently likely to merit close observation of the sedimentation rate and the PR interval. Hence one or both of these important characteristics of active infection are missing from many of the records. Two cases with adequate observations on temperature, sedimentation rate and PR interval may properly be classified as subclinical infections. Although occasionally these 2 cases showed transient temperature elevation or

temporary rises in the sedimentation rate, at no time was there any conclusive evidence of activity from the standpoint of history, physical examination or laboratory study. The cases in this group contrast rather strikingly with those presenting initial rheumatic attacks occurring in persons over sixty years of age reported by Ferris and Myers[10] and others,[11, 12] who found even in these older age groups most of the usual manifestations of active rheumatic disease, such as joint pains and polyarthritis. In many cases, however, the clinical diagnosis was not made because of advanced age. In our cases, which were similar to those reported by Hawking[13] and others,[14] activity was present in the absence of the usual clinical signs or with only isolated manifestations.

It is perhaps worth emphasizing at this point that in patients of this age group the diagnosis of active rheumatic heart disease not infrequently depends on minor and often single rheumatic manifestations.

Further evidence of the latency of acute rheumatic myocarditis is brought out by the cases in Group III, in which the presence of rheumatic heart disease was not suspected. As can be seen from Table 3, all these cases presented definite evidence of rheumatic heart disease at autopsy, 5 with old healed valvulitis acquired at an earlier attack, and 2 apparently occurring as an initial attack. The recognition of active rheumatic carditis in these cases was rendered many times more difficult by several factors: the absence of a previous history or present evidence of rheumatic fever; the advanced age, 5 of the 7 patients being approximately sixty years old; and the complicating presence of arteriosclerosis or hypertension, which appeared to offer an adequate explanation for the cardiac failure. Strangely enough, 1 patient presented several of the cardinal manifestations of rheumatic activity — namely, joint pains, signs of pericardial effusion and leukocytosis. Notwithstanding these positive features, the diagnosis of active rheumatic fever was not made, perhaps chiefly because of the patient's age (forty-seven years). It must be pointed out that in 3 of the 7 cases the death was directly attributable to the rheumatic heart disease and consequent cardiac decompensation.

Group IV is perhaps the most difficult to interpret. These patients between forty-nine and sixty-two years of age had no history suggestive of rheumatic heart disease, and the physical examination and laboratory studies shed no further light on the possibility of the presence of this disease. Yet on post-mortem examination in each case acute myocarditis with Aschoff bodies was found without anatomic evidence of pericardial or endocardial involvement. In 2 cases these Aschoff bodies were of the active cellular type, indistinguishable from those found in known rheumatic carditis. In the other 2 cases the cellularity was less striking but sufficient to warrant inclusion as active rheumatic myocarditis.

Whether, in the absence of other stigmas of rheumatic fever, one may term this involvement rheumatic myocarditis is open to the controversy regarding the specificity of the Aschoff lesion.[8] The myocardial Aschoff lesions in these cases differed in no important respect from those seen in frank rheumatic fever, and it is well known that rheumatic myocarditis may occur as an isolated lesion without valvular or pericardial involvement.[14, 15] One can only say of these cases that they represented insidious latent acute myocarditis, probably rheumatic in origin and associated in 2 cases with anatomic evidence of decompensation.

Summary and Conclusions

In a review of 41 pathologically proved cases of active rheumatic myocarditis the usual clinical manifestations of activity were sufficiently striking in 20 cases to result in a clinically correct diagnosis. Most of these patients were in the first two decades of life. The remaining 21 cases were not diagnosed as active rheumatic disease during the terminal illness; perhaps the most characteristic feature of this group was the age, which averaged fifty-three years and nine months and, except in 5 cases, was over forty years.

In 10 of these 21 patients a previous diagnosis of rheumatic heart disease had been made, and the terminal cardiac decompensation was considered to have been on a mechanical valvular basis without the complicating presence of myocarditis. Possibly owing to lack of awareness of the significance of myocarditis in these older age groups, adequate observations of the PR interval and sedimentation rate were not made in 7 cases. Although in 2 of the 10 cases at no time was there good clinical evidence of rheumatic activity, in several other cases there were single or minor manifestations of active rheumatic disease.

In 7 more of the clinically undiagnosed cases no diagnosis of rheumatic disease had been made in the past, nor was it entertained during the terminal illness. In all but 1 case rheumatic manifestations were singularly absent from this group, and the disease took what may be termed a truly silent form. It is to be noted, however, that in 3 of these patients, although the clinical disease was silent, from the pathological standpoint death was undoubtedly attributable to decompensated acute rheumatic heart disease.

The 4 remaining patients represented subclinical acute rheumatic myocarditis occurring without associated pericardial or endocardial involvement. In these cases it is likely that the myocardial disease was incidental to the actual cause of death and that therefore the diagnosis could hardly have been suspected clinically.

Active rheumatic heart disease with cardiac involvement in older age groups is frequently clinically unsuspected.

The difficulty of clinical recognition of rheumatic activity in older patients can be attributed to several factors: in these age groups active carditis assumes in a high percentage of cases an atypical form in which the diagnosis of activity may depend on careful evaluation of isolated rheumatic manifestations; active rheumatic myocarditis as a cause of cardiac failure may be obscured by the presence of complicating diseases, such as hypertension, arteriosclerosis and healed rheumatic valvular disease to which the cardiac decompensation may be reasonably attributed; and, in a certain number of cases, the disease may be entirely silent, rendering clinical recognition difficult if not impossible.

The results indicate that, contrary to the general impression, cardiac decompensation in rheumatic heart disease, even in older persons, is frequently the result of activity of the disease.

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THE USE AND ABUSE OF CHEMOTHERAPEUTIC AND ANTIBIOTIC AGENTS*

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TEN years have passed since the sulfonamides were introduced into general therapy in this country. Notable reductions in the case mortality rates of streptococcal, meningococcal and pneumococcal infections have followed the use of these drugs. The course of gonococcal, staphylococcal and other stubborn bacterial infections has been radically altered by therapy with the sulfonamides.

Table 1. *Present-Day Usage of Sulfonamides and Antibiotics in Beta-Hemolytic Streptococcus Infections.**

Infection	Agent
Tonsillitis	Sulfadiazine and derivatives†; penicillin G.‡
Peritonsillar abscess	Sulfadiazine and derivatives†; penicillin G.‡
Ludwig's angina	Combination of sulfadiazine and derivatives with penicillin G
Acute sinusitis	Sulfadiazine and derivatives†; penicillin G.‡
Otitis media	Sulfadiazine and derivatives†; penicillin G.‡
Mastoiditis	Combination of sulfadiazine and derivatives with penicillin G
Meningitis	Combination of sulfadiazine and derivatives with penicillin G
Erysipelas	Sulfadiazine and derivatives†; penicillin G.‡
Scarlet fever	Sulfadiazine and derivatives†; penicillin G.‡
Adenitis	Sulfadiazine and derivatives†; penicillin G.‡
Cellulitis	Sulfadiazine and derivatives†; penicillin G.‡
Pneumonia	Combination of sulfadiazine and derivatives with penicillin G
Empyema	Combination of sulfadiazine and derivatives with penicillin G
Peritonitis	Combination of sulfadiazine and derivatives with penicillin G
Puerperal sepsis	Combination of sulfadiazine and derivatives with penicillin G
Septicemia	Combination of sulfadiazine and derivatives with penicillin G
Osteomyelitis	Sulfadiazine and derivatives†; penicillin G.‡
Ulcers	Sulfadiazine and derivatives†; penicillin G.‡
Impetigo	Sulfadiazine and derivatives

*Indications are for oral and parenteral use only. It will be noted that streptomycin and sulfaguanidine and similar sulfonamide derivatives should not be used in the infections listed. Penicillin G is contraindicated in impetigo.

†First choice.

‡Second choice

One can say without exaggeration that the success, as well as the failures, of the sulfonamides stimulated research that led to the development of penicillin and the discovery of streptomycin. Today the physician has a choice of chemotherapeutic and antibiotic agents with which to combat infectious diseases. With several to choose

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from, it is essential that he select the drug wisely, to serve the best interests of the patient.

Selection

The physician, when confronted with an infectious process that may respond to one of several chemotherapeutic or antibiotic agents, should consider the following questions in selecting the drug with which to treat the disease:

Which agent will be the most effective?

What is the relative toxicity of the drug in the dosage prescribed?

With what ease can the compound be given?

What will the cost of the agent, or the auxiliary costs of its administration, be to the patient?

All four questions, especially the last two, are important in this day when the costs of medical care are soaring. The physician's final decision should represent his synthesis of these considerations. Too often the newest compound in this group is used, or one that is supposed to be less toxic than others, without due consideration of the cost or the relative toxicity of the various compounds that might be employed. It must be remembered that *all the sulfonamides and antibiotics in common use are capable of producing serious toxic reactions.*

Tables 1, 2 and 3 present in general terms the compounds of choice for the treatment of infections of average severity. These choices are based on the considerations discussed above. It is to be noted that sulfanilamide and sulfathiazole are not included. Either of these drugs may be used when indicated if members of the diazine group of sulfonamides are not available. "Sulfaguanidine and other sulfonamides" may be considered to include sulfasuxidine and sulfaphthalidine. In all severe cases of

TABLE 2. *Present-Day Usage of Sulfonamides and Antibiotics in Infections due to Nonhemolytic or Alpha Streptococci and Other Organisms.**

DISEASE	AGENT
Subacute bacterial endocarditis	Penicillin G
Pneumococcal infections	Sulfadiazine and derivatives†; penicillin G.‡
Pneumonia	Sulfadiazine and derivatives†; penicillin G.‡
Meningitis	Sulfadiazine and derivatives combined with penicillin G
Peritonitis	Sulfadiazine and derivatives combined with penicillin G
Otitis media	Sulfadiazine and derivatives combined with penicillin G
Mastoiditis	Sulfadiazine and derivatives combined with penicillin G
Sinusitis	Sulfadiazine and derivatives combined with penicillin G
Meningococcal infections	Sulfadiazine and derivatives combined with penicillin G
Gonococcal infections	Sulfadiazine and derivatives‡; penicillin G.†
Staphylococcal infections	Sulfadiazine and derivatives‡; penicillin G.†
Escherichia coli tissue infections	Sulfadiazine and derivatives†; streptomycin.‡
Gas gangrene	Sulfadiazine and derivatives combined with penicillin G
Cholera	Sulfadiazine and derivatives
Tularemia	Streptomycin
Tuberculosis (selected cases)	Streptomycin
Influenzal meningitis	Sulfadiazine and derivatives combined with streptomycin
Plague	Sulfadiazine and derivatives
Infections due to Friedländer bacillus	Sulfadiazine and derivatives combined with streptomycin

*Indications are for oral and parenteral use only. It will be noted that sulfaguanidine and similar sulfonamide derivatives should not be used in the infections listed. The drugs are contraindicated in the infections in which their use is not recommended.

†First choice.

‡Second choice.

TABLE 3. *Present-Day Usage of Sulfonamides and Antibiotics in Various Diseases.**

DISEASE	AGENT
Bacillary dysentery	Sulfadiazine and derivatives†; sulfaguanidine and other sulfonamides.‡
Brucellosis	Sulfadiazine and derivatives (?)†; streptomycin (?)‡; sulfadiazine and derivatives combined with streptomycin.
Typhoid fever	—
Salmonella infections	—
Chancroid	Sulfadiazine and derivatives
Urinary-tract infections:	
Aerobacter aerogenes	Sulfadiazine and derivatives†; streptomycin.‡
Esch. coli	Sulfadiazine and derivatives†; streptomycin.‡
Pseudomonas aeruginosa	Sulfadiazine and derivatives†; streptomycin.‡
Proteus vulgaris	Sulfadiazine and derivatives†; streptomycin.‡
Actinomycosis	Sulfadiazine and derivatives‡; penicillin G.†
Anthrax	Sulfadiazine and derivatives‡; streptomycin.†
Trachoma	Sulfadiazine and derivatives
Lymphopathia venereum	Sulfadiazine and derivatives
Ulcerative colitis	Sulfaguanidine and other sulfonamides(?)
Psittacosis	Penicillin G (?)
Dermatitis herpetiformis	Sulfapyridine
Influenza	—
Common cold	—
Rheumatic fever (prophylaxis only)	Sulfadiazine and derivatives
Surgical bowel conditions (preoperative)	Penicillin G
Syphilis	Penicillin G
Yaws	Penicillin G

*Indications are for oral and parenteral use only. The drugs are contraindicated in the infections in which their use is not recommended.

†First choice.

‡Second choice.

infectious diseases that respond to more than one of these agents, a combination of the two most effective agents should be used.

Dosage

It would be repetitious to outline dosage forms for the various compounds listed above. Directions regarding dosage are contained in *New and Nonofficial Remedies*,[1] to which the physician is referred for such information. Also, it can be said that accurate directions for using these drugs are contained in the package inserts of the brands that have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

Toxicity

Table 4 outlines the incidence of important toxic reactions noted in the course of sulfonamide therapy. It is obvious from the data presented that sulfadiazine is the least toxic of the four drugs listed. Although comparable figures are not readily available, sulfamerazine and sulfapyrazine appear to be somewhat less toxic than sulfadiazine.

Toxic reactions have also been observed after the administration of the antibiotics (Table 5). Initially, it was thought that penicillin was relatively nontoxic. As experience with this antibiotic has increased, however, toxic reactions, especially those of the urticarial and dermal type, have become more frequent. I have witnessed urticarial reactions, which were not only most distressing and painful to the patients but also costly, because the patients were incapacitated for weeks. All varieties from mild erythematous rashes to dermatitis exfoliativa have been noted. Penicillin is not without its danger.

When streptomycin was initially introduced as a therapeutic agent, reactions similar to those following the administration of histamine were frequent. This type of reaction has practically disappeared as the antibiotic substance has become increasingly purified. A most serious and distressing reaction characterized by vertigo and impairment of hearing, however, has been observed in the course of streptomycin therapy. In certain cases the vertigo and deafness appear to be permanent. The symptoms of vertigo and deafness rarely occur before the fourth day of streptomycin therapy. Patients should be carefully examined each day for symptoms and signs of eighth-nerve involvement, and the drug should be discontinued immediately if such effects are noted. Skin rashes and urticarial reactions similar to those seen in the course of penicillin therapy have also been noted after streptomycin administration.

It is my opinion that the time has come to inveigh against the local use of sulfonamides and the antibiotics. There is little evidence that when these agents are used externally as dusting powders, or in creams, lotions or salves, the beneficial effects outweigh the known risk of sensitizing the patient. Nothing appears to be gained from treating a minor infection locally (when parenteral or oral therapy will achieve the same end) if the patient becomes sensitized to the drug and is thus deprived of its valuable effects, when later he may have an infection in which the agent might be life saving.

TABLE 4. *Incidence of Important Toxic Reactions in the Course of Sulfonamide Therapy in Adult Patients.**

Reaction	Sulfanilamide		Sulfapyridine		Sulfathiazole		Sulfadiazine	
	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage
Fever	2910	5.0	2421	3.1	1316	6.0	4194	1.6
Rash	3066	2.2	3171	2.0	1651	5.2	5137	1.3
Acute hemolytic anemia	1630	2.0	2363	1.1	Very rare		Very rare	
Leukopenia	1000	2.0	2026	2.1	1231	1.6	4601	1.5
Agranulocytosis	1000	0.1	1444	0.8	Rare		Rare	
Hematuria, gross and microscopical	Extremely rare		2899	4.6	1749	4.7	5137	1.7
Oliguria, anuria or azotemia	Extremely rare		2560	2.2	1124	1.1	5137	0.4
Hepatitis	1000	0.6	Rare		Very rare		Very rare	
Averages		11.9		15.9		18.6		6.5

*These figures are based on the reported incidence of toxic reactions, personal experience and, in the instance of sulfadiazine, on data furnished by Finland et al.[2]

TABLE 5. *Toxic Reactions with the Antibiotics.*

Reaction	Penicillin	Streptomycin
Dermatitis	Common	Common
Urticaria	Common	Common
Fever	Common	Common
Headache	—	Occasional
Histamine-like	—	Rare
Red cells and casts	—	Common, if urine is acid
Neuritis	Rare	Not described
Eosinophilia	—	Very common
Vertigo	—	Common
Deafness	—	Occasional
Agranulocytosis	—	Rare

Conclusion

With a variety of chemotherapeutic and antibiotic agents at the physician's disposal for the treatment of infectious diseases, careful consideration must be given to the selection of the agent that best suits the needs of the patient.

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THE OPERATIVE AND POSTOPERATIVE MANAGEMENT OF HYPERTENSIVE PATIENTS UNDERGOING THORACOLUMBAR SYMPATHECTOMY

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THE surgical treatment of hypertension had its origin in the pioneer work of Crile,[1] Adson et al.,[2, 3] Page and Heuer,[4] Peet[5] and others, but it was not until the brilliant clinical studies of Smithwick,[6] first published in 1940, that a truly effective operative procedure was available. The extent of the operation described by Smithwick and employed by him for the past eight years included removal of the thoracolumbar chain from the eighth or ninth thoracic ganglion through the first or second lumbar ganglion, along with portions of the greater, lesser and least splanchnic nerves.

Hinton and Lord[7] reported 152 hypertensive patients operated on by the Smithwick technic between February, 1942, and May, 1945. Follow-up study after six months showed that 53 per cent had a fall in the level of the diastolic blood pressure of 20 points or more — that is, a Group I or Group II result according to Smithwick's classification. Only 30 per cent had diastolic readings below 100. In general the majority of patients selected had suffered from advanced hypertension, essential and malignant, and only a few cases could be classified as falling into the relatively mild or early form, the Group II of Keith, Wagener and Barker.[8]

In the hope of increasing the percentage of patients obtaining significant falls in the post-operative diastolic blood pressure we gradually extended the operation until by December, 1945, the majority underwent an extensive thoracolumbar sympathectomy, which included removal of the sympathetic chain from the third or fourth thoracic through the second or third lumbar segment, along with the entire greater, lesser and least splanchnic nerves. With sufficiently long instruments this procedure can usually be accomplished through an exposure obtained by removal of the tenth rib in toto. This operative approach has recently been described in detail.[9] A six months' follow-up study of 15 cases in which the extensive sympathectomy had been carried out revealed that 93 per cent of patients had Group I or II diastolic falls and 80 per cent had diastolic blood pressure levels under 100. The hospital mortality in 120 patients undergoing the extensive operation was approximately 6 per cent, all deaths occurring in patients with advanced hypertension.

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As a result of our experience with 400 patients subjected to the two-stage thoracolumbar sympathectomy during the past five years, certain principles of management during the operative and postoperative periods have evolved. The patients on whom the extensive sympathectomy is carried out need every possible adjunct to bring them through without serious complications due either to their disease — that is, coronary occlusion, heart failure, cerebral accident or renal failure — or to a complication of the thoracotomy, such as pleural effusion, pneumothorax, atelectasis or pneumonia.

There are two basic problems to be handled during the operative and early post-operative periods: the maintenance of an adequate blood pressure and thereby avoidance of a marked systolic fall to levels of 90 or lower, — falls that can occur with alarming suddenness especially during and after the second-stage procedure, — and, secondly, the management of the thoracotomy during and after operation.

The maintenance of a relatively stable pressure has been best achieved during the operation by the use of 2 cc. of a 1 per cent solution of Neo-Synephrine in 1000 cc. of 5 per cent glucose in distilled water administered intravenously and, postoperatively, by the same fluid with 1 cc. of Neo-Synephrine per 1000 cc. of solution until the systolic blood pressure has been stabilized at 90 or 100 or higher. This may take only a few hours or as long as forty-eight hours. Before the adoption of this method, which was suggested by Dr. Milton C. Peterson, head of the Department of Anesthesiology of the New York Post-Graduate Hospital, the anesthetist injected intramuscularly or intravenously 2 or 3 minims of Neo-Synephrine when necessary, and the same procedure was used postoperatively. Figures 1 and 2 show the blood-pressure recordings by the anesthetist during the second-stage procedure in 2 cases in which the intermittent method was used in 1 and the continuous technic in the other. In the latter procedure, if the blood pressure falls, the infusion is speeded, and when stabilization has been achieved, it is slowed.

We have found that moderate anemia develops after each stage of the extensive sympathectomy, probably owing to oozing into the extrapleural and intrapleural spaces during the early postoperative period, and for that reason a 500-cc. blood transfusion is routinely administered immediately after each stage.

The second major problem in these patients is to obtain hemostasis and to deal with the open thorax

during the operation and to prevent serious hemothorax, pneumothorax, atelectasis and pneumonia postoperatively. Grimson[10] has recently stated his position as follows: a closed anesthetic system is employed, an intratracheal tube being used only occasionally; the pleural cavity is deliberately entered through a partial third-rib and a longer tenth-rib resection, and the chain removed from the stellate ganglion through the first or second lumbar segment, inclusively, followed by the use of a closed-tube suction drainage of the pleural cavity for two or three days. We have also made use of a closed anesthetic system, usually with an intratracheal tube. Recently, we have begun a series without such a tube, and the management in the

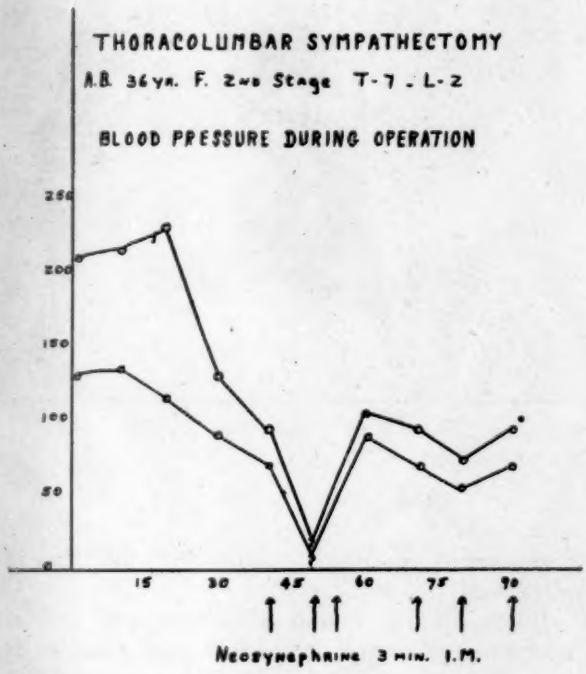

FIGURE 1.

hands of experienced anesthetists has been for the most part satisfactory. One point should be emphasized: this extensive sympathectomy should be carried out only when an anesthetist thoroughly familiar with open-chest operative procedures is administering the anesthetic. Although in our technic the parietal pleura is stripped from the chest wall from the diaphragm to the apex of the thorax, it is usually torn to a greater or lesser extent so that air readily passes into the intrapleural space.

Anesthetic agents have included ether, cyclopropane and ethylene, and the indications for and contraindications against these agents may best be found in reports by Phelps and Burdick[11] and Burdick, Phelps and Peterson.[12]

Hemostasis is not a simple matter in this procedure, and one of the frequent complications has

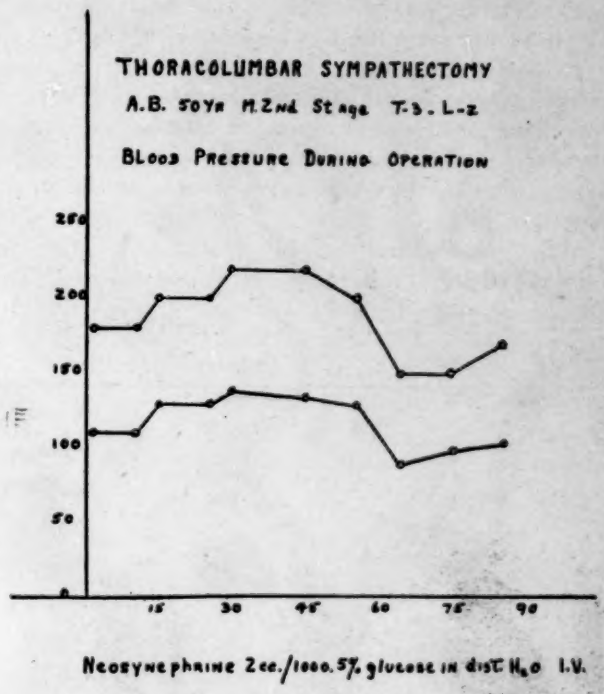

FIGURE 2.

been the development of fluid in the chest postoperatively. Grimson[10] has had similar difficulty

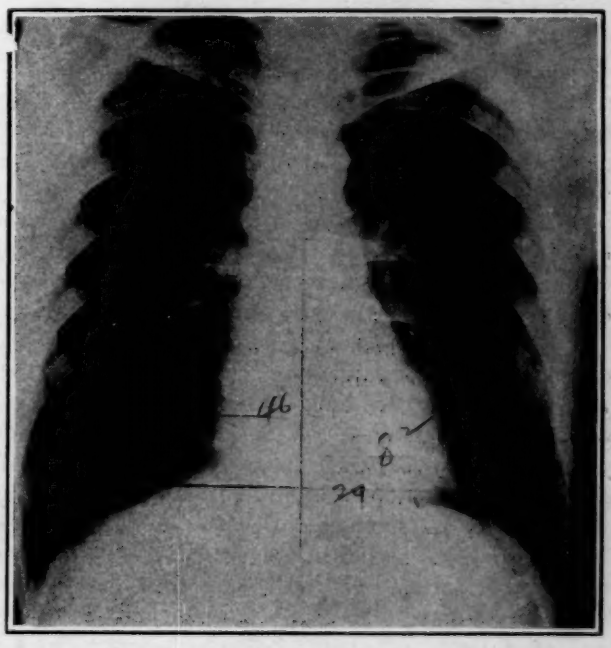

FIGURE 3.

by his method of approach. In addition to the clamp and ligature, there are at one's disposal

temporary pressure on the venous bleeder against the vertebral column, which is often satisfactory, silver clips, oxycel and other hemostatic absorbable agents, bone wax and finally the electrocautery. We have not used the last because of the fear of an explosion in the presence of such potentially dangerous anesthetic agents and the open pleura. Furthermore, the most serious difficulty with hemorrhage is presented by an accidental tear of an intercostal artery high in the chest cavity, such as the third, fourth or fifth.

When hemostasis has been obtained after the removal of the sympathetic chain and suture of the diaphragm, the chest wall is closed around a large rubber catheter placed in the pleural space. Air is completely aspirated, the catheter removed, and the skin closed without drainage. During the entire postoperative period, but particularly during the first forty-eight hours, careful, repeated bedside examination of the chest must be made. Signs of fluid or atelectasis (usually due to fluid), or both, are promptly checked by an x-ray film of the chest taken with a portable apparatus, and aspiration with a large (No. 15) needle is carried out. Figure 3 shows the preoperative radiogram of a patient who postoperatively developed signs of fluid on the left side. Figure 4 illustrates radiograms taken on the sixth, tenth and thirteenth postoperative days. Aspiration of 525, 1050 and 900 cc. were made on the seventh, ninth and twelfth days. It is interesting that significant fluid accumulated only after the first operation, and after a second-stage sympathectomy on the right side no fluid developed. In patients with poor cardiac reserve unrecognized pleural effusions (usually hemorrhagic) may be of the gravest significance, and prompt recognition and treatment may be life saving.

Other factors of importance in the postoperative management are as follows:

Oxygen therapy (by nasal catheter, mask or tent) is used in patients with low preoperative cardiac reserve.

Digitalization of patients preoperatively is effected when evidence of actual or impending congestive heart failure is present, and the drug is continued after operation.

Penicillin in liberal doses is given intramuscularly when the operation has been more difficult than usual or when the pleura has been widely torn, with potential trauma to the lung by retraction.

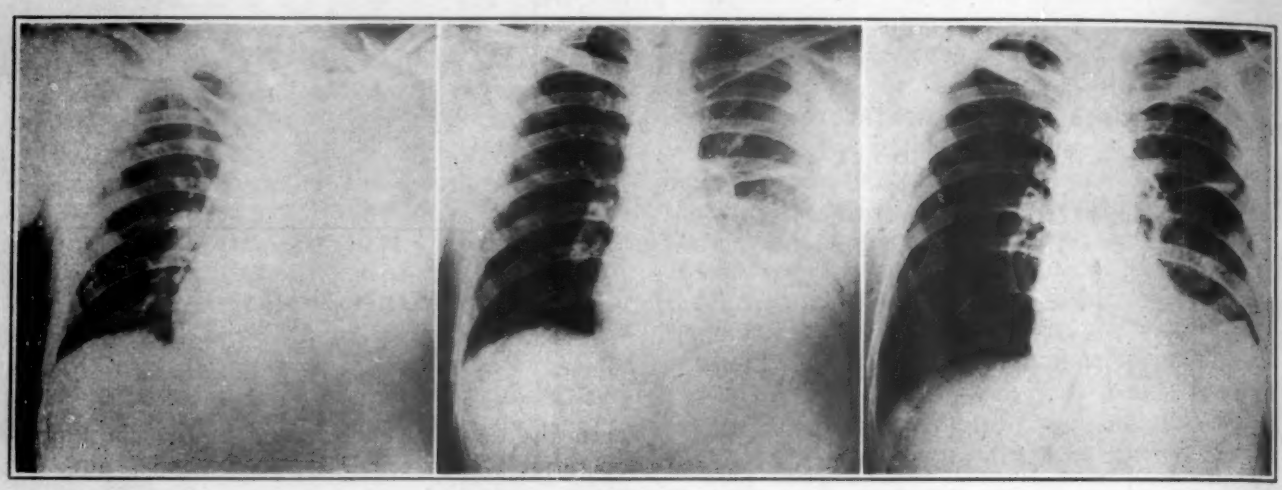

FIGURE 4.

Study of the blood urea nitrogen and the nonprotein nitrogen on the first postoperative day is made to determine to what degree renal function has been disturbed. Occasionally, the blood chemical constituents become greatly elevated after operation, in spite of fairly adequate preoperative renal function, and only by energetic treatment with large amounts of 10 per cent glucose in distilled water and blood transfusions can a serious degree of uremia be avoided. No patient is given physiologic saline solution intravenously during or after either stage of the procedure.

The red-cell count is checked on the first postoperative day, and if an anemia is present in spite of the regular transfusion, further transfusions are administered.

Early ambulation is practiced only after the first-stage sympathectomy. After the second operation patients are allowed up when the blood pressure has been stabilized and when the cerebral and cardiac functions are adequate.

Finally, in a few patients, who preoperatively had had either a stroke or a coronary occlusion, we have cautiously used subcutaneous heparin in Pitkin menstruum postoperatively. Coronary thrombosis is theoretically more likely in a patient who previously has had such an accident and in whom the blood pressure has been reduced sharply from hypertensive to normotensive levels. That this accident does not occur more frequently is remarkable, but the careful use of heparin may be valuable in selected cases. So far, no serious untoward effect has followed the administration of this anticoagulant.

Summary

In the operative and postoperative management of hypertensive patients undergoing extensive thoracolumbar sympathectomy, including the third or fourth thoracic through the second or third lumbar ganglions, certain factors are of value: the use of 2 cc. of a 1 per cent solution of Neo-Synephrine in the intravenous fluid given during and after each operative stage; and closure of the chest incision without drainage, followed by careful postoperative check-up by physical examination and portable x-ray films.

The types of anesthetic agent, the use of oxygen, digitalis, penicillin, studies of the blood chemistry and red-cell count, early ambulation and heparinization are discussed.

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PNEUMOPERITONEUM FOLLOWING GASTROSCOPY APPARENTLY WITHOUT PERFORATION

Report of a Case

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BOSTON

PNEUMOPERITONEUM following the usually benign procedure of gastroscopy is so startling when it occurs that an additional report is believed to be of value. There have been only three previous reports of this condition. In the first, presented by Schiff[1] in 1941, the only finding was subdiaphragmatic air at x-ray examination four days after the gastroscopy. In the case reported by Schindler[2] in 1945, laparotomy was performed three hours after the onset of the pneumoperitoneum; methylene blue was injected into the gastric lumen, and oxygen blown into the stomach under a pressure of 60 pounds, but no perforation was found. Berk[3] reported the third case, in which, again, no perforation could be found at laparotomy. Schindler postulated a slit-like perforation of the stomach that promptly healed, although no trace of it was present.

The following case† differs from those previously reported in that a large gastric ulcer was present (Fig. 1).

E. L., a 42-year-old truck driver, was admitted to the hospital on March 5, 1947, for gastroscopy, which was unsatisfactory. The instrument passed with ease, but the stomach was difficult to inflate and contained considerable mucus. An ulceration was momentarily visualized, but not sufficiently to make a diagnosis. Because of the large amount of mucus, the instrument was removed. The patient belched copiously but did not complain of pain. An Ewald tube was passed, and an attempt was made to aspirate the mucus. Nothing was obtained. The gastroscope was reintroduced easily. The stomach did not inflate to any degree, and the examination was terminated. The abdomen was distended, but the patient could not belch any air. The distention continued all day.

Physical examination showed the abdomen to be tight and tympanitic; the liver dullness had disappeared. Both leaves of the diaphragm were high. Examination of the scrotum revealed emphysema. The patient was not in shock and had no pain, but he became dizzy if his position was changed. The temperature, pulse and respirations were normal.

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†Reported through the courtesy of Dr. Leo Lynch, of Malden, Massachusetts.

Examination of the blood disclosed a white-cell count of 20,000. A plain film of the abdomen demonstrated a marked pneumoperitoneum (Fig. 2).

The diagnosis was pneumoperitoneum without apparent perforation.

Since the only complaint throughout the day was a feeling of fullness, the patient was allowed to continue his ulcer management, which he did without distress or nausea. However, during the early evening, the temperature, which had been normal all day, began to rise, and it was deemed inadvisable to continue the policy of noninterference. Accordingly, exploration was decided on.

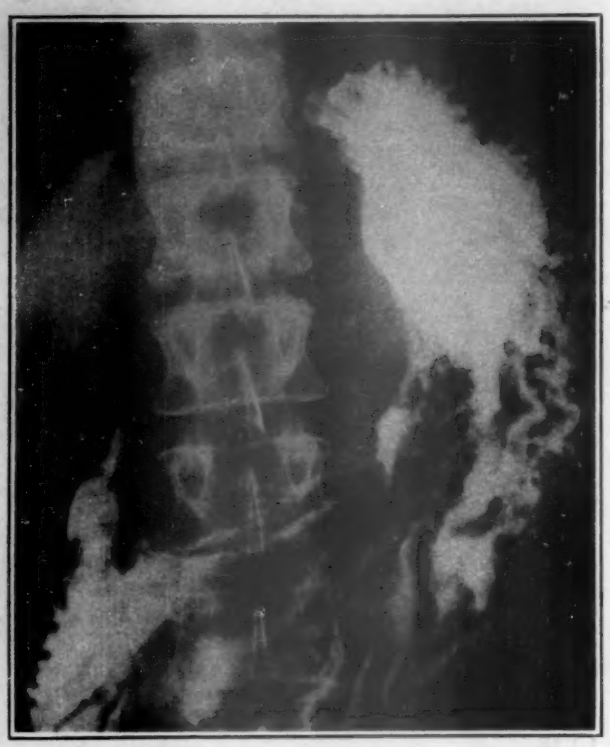

FIGURE 1. *Roentgenogram Showing Large Gastric Ulcer on the Lesser Curvature.*

At operation* under spinal anesthesia a high left rectus muscle incision was made. The peritoneum was under such marked tension that it was difficult to grasp it with forceps. Opening released a gust of air much more violent than that encountered in the ordinary case of perforated ulcer. The abdomen collapsed. There was no intestinal distention, no free fluid and no fibrin. The stomach was thickened, and there were emphysematous blebs along the lesser curvature and extending into the fundus. There was no perforation on the anterior gastric surface. The lesser omental sac was opened through the omentum and the posterior wall inspected, but there was no perforation. Marked retroperitoneal emphysema was observed over the aorta. Since it seemed that there must be a microscopic perforation — probably retroperitoneal — and since the ulcer was not definitely palpable, the stomach was opened. An ulcer crater, almost 2 cm. in diameter, was discovered on the posterior wall, extending onto the lesser curvature at its mid-portion. The lesser omentum was dissected from the lesser curvature, and the right and left gastric arteries were ligated. A wedge resection was done after the method of Walton. The mucous membrane was approximated with silk. Gastroenterostomy was not performed. Rents in the greater and lesser omentum were repaired. The abdomen was closed in layers without drainage.

*Performed by Dr. W. J. Reynolds.

On March 8 the course was uneventful. The emphysema was still present in the carotid sheath and suprapubically.

Pathological examination by Dr. M. V. MacKenzie revealed a roughly triangular piece of stomach wall measuring 5.0 by 3.0 by 1.5 cm. The mucosa was velvety, edematous and grayish white. In the center there was a punched-out ulcer crater measuring 1.2 by 2 cm. and extending approximately 0.5 cm. below the surface. The edges were rolled, and the base contained adherent, fibrous tags of tissue. The serosal surface was spongy and edematous, with adherent fibrous tags of tissue and many areas of hemorrhage. Section revealed a homogeneous, edematous, pink-gray surface with many flecks of necrotic tissue and areas of hemorrhage. The ulceration had extended through the muscularis but had not, apparently, penetrated the serosa. The presence of dilated lymphatic vessels (including the perineural vessels) suggested a possible pathway for the air.

The gross diagnosis was chronic penetrating gastric ulcer, with necrosis and marked edema of the surrounding tissue.

The patient experienced no abdominal pain, beyond the usual discomfort associated with distention, at any time during the gastroscopic examination. The scrotal emphysema was noted late in the day after gastroscopy, but the carotid sheath and suprapubic emphysema did not appear until the following morning. In this case, the Walton resection of the ulcer was justified because of the interstitial emphysema of the wall of the stomach. It is doubtful if the sutures of a subtotal gastrectomy would have held in this tissue.

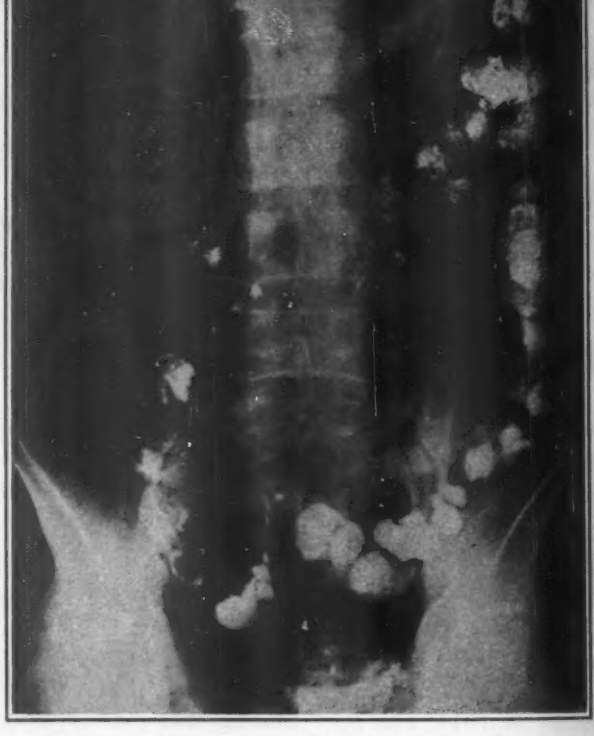

FIGURE 2. *Roentgenogram of Abdomen Showing Marked Pneumoperitoneum.*

The possible anatomic route for the spread of the emphysema is suggested in the description of the microscopical appearance of the tissue taken from the ulcer. The perineural lymphatic vessels were dilated more than is seen in a section through an ordinary gastric ulcer. The interstitial emphysema of the stomach wall may be explained on this basis. The free air in the peritoneal cavity had probably been diffused through the very thin base of the ulcer. The peripheral emphysema of the scrotum along the fascial planes, in the neck and in the abdominal wall may have been due to the passage of air along the lymphatic and blood vessels of the stomach wall.

In 2 of the previously reported cases,[2,3] as in the case reported above, laparotomy was performed soon after the occurrence of the pneumoperitoneum. Because of the rarity of the complication, laparotomy was justified, to find and repair any possible perforation. In the future, however, if I encounter a similar case, I shall not be so anxious to have the patient explored, but shall at once put a needle of large caliber into the abdomen, with the patient lying on his back, and attempt to remove the free air in the peritoneum by this means, waiting for further signs of perforation before asking for a laparotomy.

Summary

A case of pneumoperitoneum following gastroscopy is reported.

A brief review of the literature is presented.

A suggestion regarding the management of such cases is made.

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MEDICAL PROGRESS

INFLUENZA*

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INFLUENZA is an old and well established disease that has appeared in epidemics and pandemics since before the seventeenth century. Despite its long history, however, the cause or causes of both epidemic and pandemic influenza remained unknown until fifteen years ago. Since then, remarkable progress in the methods of study and knowledge of epidemic influenza has taken place: epidemic influenza has been established as a virus infection caused by one or the other of two very similar agents; methods have been devised that have permitted chemical and physical characterization of the viruses; re-evaluation of the clinical and epidemiologic nature of influenza has been made possible on the basis of a simple and specific laboratory diagnostic test; and, finally, a vaccine that holds some promise for the ultimate prevention and control of the disease has been developed. The cause of pandemic influenza is still unknown. The following discussion is an attempt to summarize recent progress, with no intent exhaustively to review the literature.

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Cause of Epidemic Influenza

In 1933 Smith, Andrewes and Laidlaw,[1] in England, accomplished for the first time the transmission of infection from a human case of influenza to an animal, the ferret. They determined that the agent was a virus that, immunologically, was causally related to the human disease. In the following year, Francis[2] confirmed this observation in the United States and isolated, from a specimen obtained in Puerto Rico, a similar strain, termed "PR8," which has been widely used for investigative purposes in this country. It soon became apparent, however, that strains of this immunologic character were not responsible for all the outbreaks of acute respiratory disease resembling influenza clinically and epidemiologically. In 1940 Francis[3] isolated in ferrets a new strain of influenza virus, termed the "Lee" strain, which was immunologically distinct from the former strains. A similar strain was isolated in the same year by Magill.[4] The two types of virus are now known as influenza virus A, of which the PR8 strain is an example, and influenza virus B, typified by the Lee strain.[5]

Thus, two similar but immunologically distinct viruses cause human influenza. Comparable situa-

tions are well known among bacteria, such as the pneumococcus Types I and II, either of which may cause pneumococcal or lobar pneumonia. The many strains of influenza virus that have now been isolated in various parts of the world have shown individual antigenic differences, but all of them have the broad characteristics of either A or B types. Thus far a third immunologic type has not been found, although the existence of such a type has been postulated on clinical and epidemiologic grounds.[6–8] There is no definitive evidence that the virus causing influenza in swine[9–11] also causes human infection. This agent, however, is quite similar to the human influenza viruses A and B in its physical and chemical characteristics,[12] and is related immunologically to human influenza virus A.[13–15]

Bacteria play no primary role in the causation of influenza. In a relatively small proportion of cases, however, pathogenic bacteria of the respiratory tract, such as pneumococci, hemolytic streptococci and staphylococci, may be responsible for complicating "secondary infections," the most important of which is pneumonia.[16–18] For reasons that are as yet undetermined, such secondary infections appear to be prominent clinically in only occasional epidemics of influenza[19, 20] despite the consistent correlation between excess pneumonia mortality and the occurrence of outbreaks of influenza.[21]

Characteristics of Influenza Viruses

After isolation and passage of the influenza viruses in the ferret, it was soon found that the agents could be transferred to mice and to embryonated hen's eggs. In mice, inoculated intranasally, the viruses produced a fatal pneumonia. No specific lesions were ordinarily found in embryonated eggs, but the agents multiplied readily and were present in high concentration in the allantoic and amniotic fluids. This latter observation has been of the utmost importance in subsequent studies of the characteristics of influenza viruses, since the egg technic has made possible the rapid and simple production of large quantities of virus. By means of the ultracentrifuge, it has been possible to sediment the virus from the infected allantoic fluid, and to wash, concentrate and essentially purify the agent. Such partially purified preparations have been used for determinations of the chemical and physical properties of the viruses, as well as for further studies of their biologic characteristics. Only a brief summary of some of this work is given below; more detailed information is available in the papers of Beard et al.,[22–24] Friedewald and Pickles,[25] Stanley and his associates[26–28] and Wyckoff.[29]

Chemical Composition

In general chemical constitution, the human and swine influenza viruses are closely similar and resemble many bacteria in complexity (Table 1). The virus particles are composed of protein, carbohydrate, lipid and small amounts of nucleic acid of the desoxyribose type.[30] More detailed analysis has revealed differences in composition of these complexes, the immunologic significance of which remains to be determined. In this respect, future study of the carbohydrate fractions will be of interest in comparison with bacterial carbohydrates, many of which have a high degree of specific immunologic activity.

Table 1. *The Physical Properties and Chemical Constitution of the Influenza Viruses.**

Influenza Virus	Chemical Constitution				Physical Properties		
	Protein	Nucleic Acid	Carbohydrate	Lipid	Diameter-Sedimentation Velocity Data	Diameter-Electron-Microscope Data	Water Content†
	%‡	%‡	%‡	%‡	*millimicrons*	*millimicrons*	%
A.....	65.0	2.1	12.5	23.4	116	101.0	52.0
B.....	63.3	3.7	13.1	22.4	124	123.0	34.5
Swine	67.6	+	10.0	24.0	117	96.5	43.3

*Taken from Taylor[30] and Sharp et al.[31]
†By volume.
‡Percentage of the dry weight of the whole complex.

Physical Properties

Perhaps the most spectacular progress in the study of viruses has been made by the use of the newer physical apparatus and technics. The ultracentrifuge has not only made possible the concentration and purification of virus preparations but also provided a method of determining to a considerable extent the homogeneity or purity of the preparation so obtained. By means of a special or "analytical" rotor, it is possible to photograph the boundary of the sedimenting virus as the centrifuge spins. The presence and sharpness of a single such "sedimentation boundary" indicate the homogeneity of the preparation and the uniformity of the size and shape of the particles. From the rate of descent of the boundary, or "sedimentation velocity," and the specific density, the size of the particles can be estimated by calculation. From determinations of density and partial specific volume, it is also possible to estimate the amount of water associated with the

virus particles. Such data on diameter and water content of the influenza viruses are given in Table 1.

In addition to the methods of study described above, it is now possible to photograph the virus particles themselves by means of the electron microscope and to make direct observations of the size and shape of the images on photographic plates or prints. Direct measurement of the diameter of influenza-virus particles shows moderate variation in size, with an average diameter of approximately 100 millimicrons, which is about one tenth the diameter of the smallest bacteria.

The human influenza viruses A and B and the swine influenza virus are indistinguishable under the electron microscope. Purified preparations appear

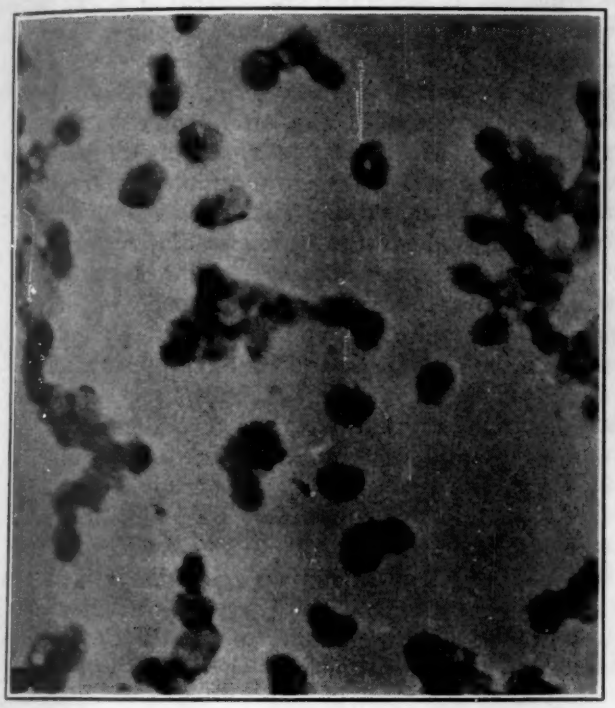

FIGURE 1. *Electron Micrograph of Influenza Virus A by Usual Technic (x 46,000).*

to consist of rounded or bean-shaped, cell-like particles when examined by the usual technic, which gives a two-dimensional image (Fig. 1). Recently, Williams and Wyckoff[32] described a "shadow" technic, which introduces a three-dimensional appearance, brought about by the deposition at an angle of a thin layer of vaporized metal over the dried film of virus. The "shadow" is that area, behind the particle, on which no metal is deposited. Viewed by this technic, the influenza-virus particle appears as a more or less spherical body, varying somewhat in size and shape (Fig. 2).

Although the full significance of these observations has not yet been determined, there is increasing evidence that the influenza viruses are not molecular in nature but have a behavior and structure indicative of organized cell-like bodies surrounded by a semipermeable limiting membrane.[31]

Biologic Characteristics

Since the adaptation of the influenza viruses to the mouse and embryonated egg, the biologic properties of the agents have been extensively studied.

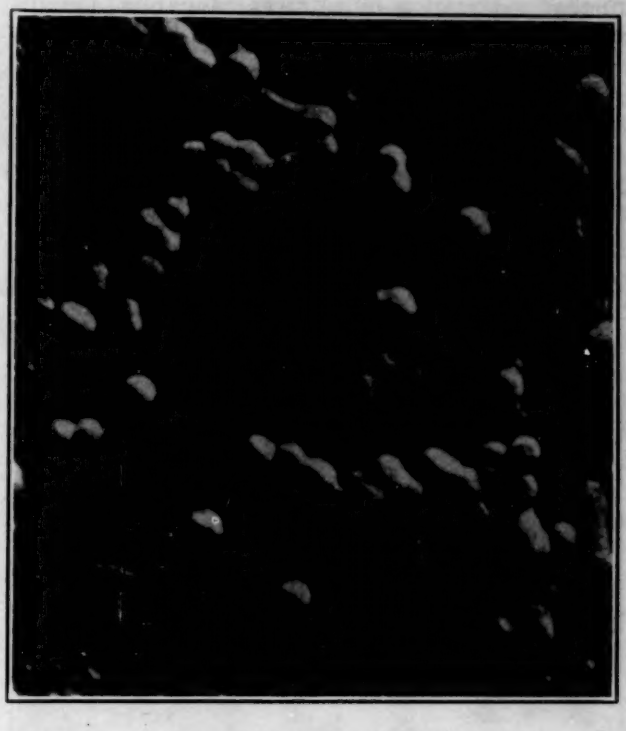

FIGURE 2. *Electron Micrograph of Influenza Virus A by Shadow Technic Employing Metallic Chromium (x 50,000).*

The infectivity for mice and eggs provided a means of quantitating the amount of virus in a given preparation. This activity, in turn, was found to be neutralized by specific antiserums, which permitted comparison of the antigenic composition of different strains of virus and also serologic diagnosis of human infection. Complement fixation was similarly employed. The two technics of neutralization and complement fixation have now been largely replaced by a simpler and less expensive test in vitro. In 1941 Hirst,[33] and independently McClelland and Hare,[34] observed that chicken red cells were agglutinated by allantoic fluid containing influenza virus, and that such agglutination could be inhibited by immune serum. On the basis of this property of the virus, an in vitro test that permits the rapid determination of the virus content of an infected fluid or of the amount of antibody in a serum was developed.[35, 36] Further study of the mechanism of the reaction revealed that the virus was adsorbed to the erythrocytes prior to their agglutination and that, under proper condi-

tions, it could be concentrated by elution from the cells.[37, 38] The discovery and application of this biologic property constitute a major contribution to the academic and practical study of influenza. The reaction has been utilized for fundamental investigations of the characteristics of strains of virus as they are isolated from human patients and adapted to other tissues. It has been of value for concentration and partial purification in the preparation of vaccines and as a preliminary step before further purification by ultracentrifugation. Finally, it has provided the basis for a simple method of confirming the diagnosis of influenza in the laboratory.

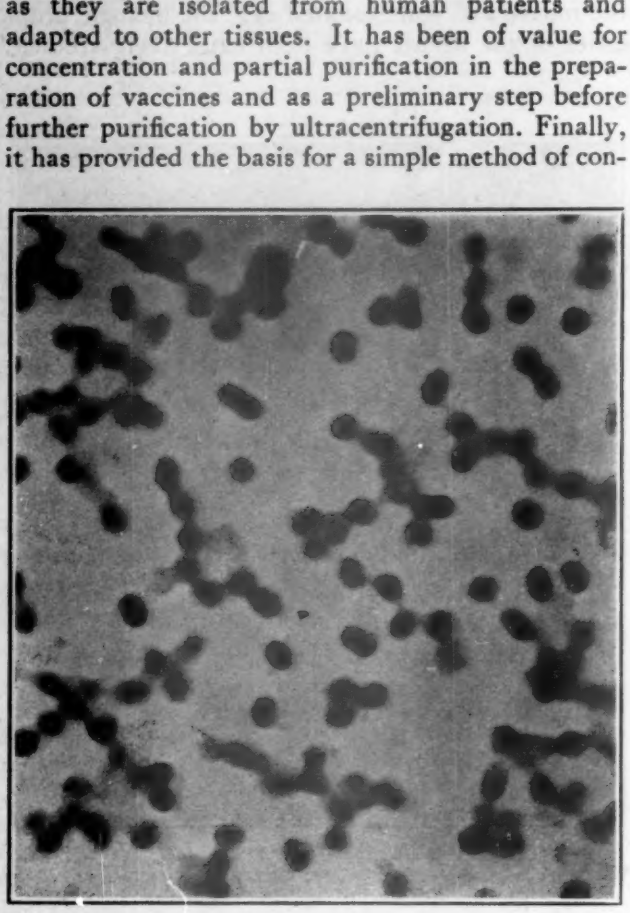

FIGURE 3. *Electron Micrograph of Influenza-Virus Vaccine (x 35,000).*

Preparations of concentrated and partially purified influenza viruses have provided laboratory investigators with more highly refined reagents for study of the biologic characteristics of the agent than were previously available. Such materials have been utilized not only for the evaluation of serologic methods for diagnosis but also for the study of the immunizing capacity of the viruses in man and in animals.[39–48] The present influenza-virus vaccine is one of the results of this work (Fig. 3). A toxic action, apparently inherent in certain strains of living influenza virus, has also been demonstrated in both crude and partially purified preparations.[48a] The toxic activity is destroyed when the virus is killed by heat or formalin.

An additional biologic characteristic of influenza viruses that warrants consideration here is the considerable variation in the antigenic composition of individual strains of influenza virus A. For example, the strains isolated from patients during the late winter and spring of 1946–1947 differed antigenically from the PR8 strain to such an extent that serums drawn during the acute and convalescent phases showed no change in antibody titer when tested with the PR8 strain, and yet showed a definite rise in titer to the newly isolated homologous strain.[49, 50] Such changes in the characteristics of influenza virus A, which may be due to true mutation, are of great academic interest to those seeking an understanding of the biologic behavior of influenza.[51] They are perhaps of even greater practical importance to those concerned with the laboratory diagnosis of influenza and the preparation of influenza-virus vaccines, as indicated below.

CLINICAL CHARACTERISTICS

Influenza is generally considered as a dramatic and acute respiratory disease.[52, 53] The onset is often described as sudden and abrupt — so much so that the patient may give the exact hour, prior to which he felt well and after which he was ill. Occasionally fainting or collapse may be the first sign of infection. The early complaints are those of headache, pain in the eyeballs and on movements of the eyes, pain in the back and muscles, malaise, fatigue, weakness or dizziness, chilliness and feverishness. Respiratory symptoms, such as coryza, husky voice, sore throat and dry cough, may or may not be prominent and usually appear after the more marked constitutional symptoms. On physical examination, the patient appears to be acutely ill and markedly prostrated. The temperature is elevated, and there is a relative bradycardia. The face is flushed. Cyanosis may be present, and the skin is occasionally of a peculiar purplish or heliotropic hue. Conjunctivitis is prominent, and the throat appears injected but dry, with a "granular" appearance. The remainder of the physical examination is noncontributory, although occasionally moist rales and rhonchi may be heard in the chest. Leukopenia is the rule.

The course of the illness is characterized by a brisk fever, lasting three to five days and often diphasic. Defervescence is accompanied and followed by marked asthenia. Complications are infrequent, apart from pandemics, and vary in type from pneumonia to sinusitis. The pneumonia is occasionally caused by the virus but is usually due to a secondary or simultaneous bacterial invasion with such organisms as pneumococci, beta-hemolytic streptococci, staphylococci and influenza bacilli. Such an infection may be fulminating and rapidly fatal.

This is essentially the "textbook picture" and is drawn, to a large extent, from observations made during the catastrophic pandemics of influenza. Since 1920, particularly since isolation of the influenza viruses permitted laboratory confirmation of the clinical diagnosis, the clinical picture has

been shown to be much more variable and less striking. During the period of an influenza epidemic, the majority of patients seeking medical care for respiratory illness show laboratory evidence of infection with the influenza virus, almost regardless of the clinical characteristics presented. In noninfluenzal periods, the reverse is true. If one compares the frequency of symptoms and signs in two such groups of patients, selected on a laboratory basis as "influenza" and "noninfluenzal respiratory disease," it will be found that the former group more nearly approaches the textbook picture. In the epidemic of influenza A during the winter of 1943–1944, for example, it was observed that a sudden onset occurred in 35 per cent of cases of influenza in contrast to 19 per cent of the noninfluenza cases. The values were 94 and 82 per cent for feverishness, 70 and 53 per cent for malaise, 42 and 69 per cent for sore throat and 84 and 85 per cent for cough, respectively. On physical examination, 32 per cent of patients with influenza were considered to be moderately or severely ill, whereas only 10 per cent of the "noninfluenza" cases were so classified. The signs of flushed face were found in 45 and 22 per cent, of injected conjunctiva in 46 and 21 per cent, of pharyngeal injection in 6 and 13 per cent, and of rales in the lungs in 11 and 6 per cent, respectively.[54, 55] It is thus apparent that cases of influenza, as a group, present a clinical syndrome that differs significantly from that of noninfluenzal respiratory disease. The same symptoms and signs, however, occur frequently enough in patients of both groups to prevent a definitive clinical diagnosis in a single patient without laboratory confirmation.

In epidemic periods, moreover, inapparent or subclinical infection with the influenza virus, detectable serologically, occurs two or three times more frequently than that of clinically recognizable influenza.[54, 56] Influenza must therefore be considered a respiratory disease that varies in its clinical nature from a symptomless infection to a severe and at times rapidly fatal disease.

There is now no doubt that sporadic infection with either influenza virus A or B may occur in nonepidemic periods, as proved both serologically and by isolation of the virus.[6, 8, 57–60] Such cases, however, are almost invariably detected by laboratory methods. The clinical diagnosis of influenza A or B in nonepidemic periods is usually in error.

Diagnosis

Since the clinical picture in the individual patient, or in the sporadic case, is not a reliable indication of the occurrence of influenza, the question naturally arises regarding the means by which influenza A or B can be diagnosed. Generally, such a diagnosis can be based most reliably on a combination of clinical and epidemiologic data. The occurrence of an unusual number of cases of respiratory illness, many of which exhibit the clinical features associated with influenza, is strong presumptive evidence in favor of the diagnosis of influenza. Confirmation of the diagnosis, however, must be made in the laboratory. Two general methods are available: isolation of the virus and determination of the antibody titers of the patients' serums.

Isolation of the virus is the more difficult and expensive of the two methods. Satisfactory specimens for this purpose may be obtained by washing the patient's nose and throat, or having him gargle, with nutrient broth or buffered saline solution. Such specimens should be collected prior to the fourth day of illness, since the virus is rarely found after that time. The virus may then be sought by the intranasal inoculation of ferrets or by the inoculation of embryonated eggs.[1, 2, 61–64] When the latter procedure is employed, bacterial infection may be prevented by filtration of the washings or by the addition of sulfonamides and antibiotic agents.[65–68] The presence of the virus in ferrets is indicated by fever and injection of the nasal turbinates, and after passage to additional ferrets, by the production of pneumonic lesions. In eggs, the virus may be detected by its ability to agglutinate erythrocytes. Once established in either ferrets or eggs, the strain may be identified as influenza virus A or B by immunologic methods employing known antiserums for each of the two types of virus.

Diagnosis by determination of the antibody titers of the patients' serums requires the collection of two specimens of serum, one obtained during the acute phase of the disease, preferably before the fifth day, and the other, a convalescent specimen, obtained about the fourteenth day of disease or thereafter. These serums are then titrated for antibody content with a known strain of influenza virus A and one of virus B. Such determinations may be performed by measuring the capacity of the serums to inhibit agglutination of chicken erythrocytes by the virus (agglutinin-inhibition test), by complement fixation or by titrating the capacity of the serums to prevent the infection of mice or eggs by known quantities of virus (neutralization test). The simplest of these determinations and the one most widely used today is the agglutinin-inhibition test. A fourfold or greater increase in antibody titer for one or the other of the two viruses, between serums drawn during the acute and convalescent phases, is generally accepted as indicative of specific infection with that type of influenza virus. It is important that both serums be examined on the same day with the same set of reagents to avoid differences in titer due to technical variations in the tests. It is also essential that this test be carried out with the strain causing the current epidemic, when that strain is available.[49, 50]

Neither of these laboratory procedures will permit more than a retrospective or confirmatory diagnosis in an individual patient because of the time required

for their performance. With unusually good fortune, the virus may be isolated in eggs and identified within forty-eight to seventy-two hours from the time of collection of the washing. More frequently from one to three weeks is necessary. Similarly, serologic diagnosis cannot be made for at least nine to fourteen days after the onset of illness, because of the time required for antibody formation in the patient. The development of a rapid diagnostic test would be a major contribution to the problem of influenza.

Treatment

There is no specific agent available for the treatment of influenza. As with other virus diseases, specific antiserum does not alter the course of the disease once the infection is sufficiently established to be recognized as a clinical illness. The sulfonamide drugs and penicillin have no effect on either the virus or the clinical disease. A great deal of time and effort has been and is being spent in the search for chemical or antibiotic agents that might be active against viruses without damaging the host cells — a requirement that must be met before successful therapy will be attained. Although the results with nitroakridin[69] and with various complex polysaccharides[69a, 69b] appear to be hopeful, no agent has yet been found that can be recommended for clinical use.

The treatment of uncomplicated influenza thus consists of supportive measures, such as bed rest, antipyretics and sedation as indicated, and fluids sufficient to give an output of at least 1000 to 1500 cc. per day. Steam inhalations frequently relieve to a considerable extent the symptoms of irritation of the respiratory tract. The bacterial complications of influenza should be treated with sulfonamides or antibiotic agents in the same way that similar bacterial infections are treated in the absence of influenza. Penicillin is now the agent of choice when the causative organism is a beta-hemolytic streptococcus, a pneumococcus or a staphylococcus. Streptomycin may be effective when the organism is a gram-negative bacillus, such as *Haemophilus influenzae*.[70]

At present the routine use of sulfonamides or antibiotics for the prevention of complications appears to be neither necessary nor desirable, since their administration is not without the hazards of sensitization and toxic reactions. In the epidemics of influenza that have occurred since 1920, the incidence of complications has been extremely low, and the mortality even lower. Prophylactic use of these agents may be of value, however, in patients who are most severely ill and in those who are harboring pathogenic bacteria in the upper respiratory passages. In the 1940–1941 epidemic of influenza A, for example, *Staphylococcus aureus* was found with unusual frequency in throat cultures of patients with influenza, and pneumonia due to this organism was an outstanding feature of the epidemic.[19, 20] It seems reasonable to expect that these antibacterial drugs will be of prophylactic as well as therapeutic value in the event of another pandemic of influenza.

Periodic Recurrence of Epidemic Influenza

For a number of years, the periodic recurrence of influenza has been of considerable interest to biostatisticians, epidemiologists and others concerned with the cyclic occurrence of infectious disease and the reasons for such behavior. These studies, generally considered to be of academic interest only, assumed practical importance during the war. Predictions of the occurrence of epidemics were sought not only to prepare for the hospitalization and care of the casualties from influenza but also to indicate the most effective time for administration of the relatively limited supply of influenza-virus vaccine. If it were possible reliably to predict the recurrence of influenza A or B, indiscriminate use of the vaccine could be avoided.

Such predictions, on a world-wide basis, were not possible then and are not now, because the usual epidemics of influenza do not occur simultaneously throughout the world.[71] In the United States, however, a more consistent pattern of recurrence seems to obtain. In the brief period since the identification of the two influenza viruses, influenza A has occurred at an interval of two to three years and influenza B at an interval of four to six years, as demonstrated serologically and by isolation of the viruses.[7, 58, 72, 73] These cycles of recurrence for influenza A and B, projected back to 1920, will account for each year in which there has been an excess mortality from pneumonia and influenza — a criterion that Collins[21] has employed to indicate the occurrence of epidemic influenza. If the cycles are correctly defined, twelve of the eighteen epidemics of influenza since the pandemic of 1918 and 1919 have been due to influenza virus A. Seven of the twelve epidemics have been separated by two-year intervals, and the remainder by three-year intervals. Similarly, influenza B has recurred at four-year intervals three times and at five-year to six-year intervals on two occasions.

It thus appears possible to predict the probability of recurrence of influenza A or B in the United States within the definite time limits of two to three years and four to six years, respectively. Further observations in the coming years are necessary to test the validity of this theory, particularly in view of the apparent capacity of influenza virus A to undergo what might be termed "antigenic mutation." If the behavior proves to be constant, there appears to be little reason to immunize with influenza virus A in the year following an epidemic of influenza A, or with virus B in the three years following an outbreak of influenza B.

Influenza-Virus Vaccine

Prior to the war, several extensive studies of the prophylactic effect of influenza-virus vaccines were carried out.[74–77] The vaccines employed consisted of emulsions of chick-embryo tissue containing relatively low concentrations of influenza virus A. The results obtained with this vaccine indicated in general a reduction in attack rate of approximately 50 per cent in the immunized population groups.

With the development of the improved methods for growing and concentrating the viruses and the advent of war, added impetus was given to the evaluation of immunization procedures. The Commission on Influenza[39, 78] observed approximately 70 per cent protection during the 1943 epidemic of influenza A in immunized, as contrasted with control groups observed at California, Iowa, Michigan, Minnesota and New York. In the 1945–1946 outbreak of influenza B, the results suggested even better prevention.[59, 79] During the recent 1946-1947 outbreak of influenza A, however, vaccinated and control groups showed no significant difference in the occurrence of influenza,[49, 50, 79a] indicating the failure of the vaccine to induce immunity. In retrospect, it appears probable that this failure was due to the antigenic differences between the strain of virus responsible for the epidemic and the strains incorporated in the vaccine employed.[49, 50, 79a]

Although there is no reason to discount the former successful trials of immunization because of last year's failure, it is apparent that further investigation is necessary before influenza-virus vaccine is accepted as an established agent for immunization. It is possible that antigenic variations in the influenza viruses will prevent successful immunization unless new strains can be isolated from sporadic cases in advance of the epidemic and incorporated in the vaccine. There is also reason to believe that parenteral inoculation of killed virus may not be the final answer to the prevention of influenza. Whereas such inoculation, in the majority of cases, will elevate the antibody level in the blood, the exact relation between humoral antibodies and resistance to infection is still undetermined. The portal of entry of the virus is the respiratory tract, and the possibilities of local tissue immunization, which Burnet[80] has emphasized, have not been exhausted.[81] In this regard, the experiments of McLean, Beard and Beard[48] with swine influenza, which in its uncomplicated form closely resembles human influenza clinically and immunologically, are pertinent. Parenteral administration of formalin-inactivated, purified swine influenza virus conferred resistance on 37 per cent of the animals to challenge infection with active virus, whereas exposure to active virus, regardless of the severity of resulting disease, rendered 82 per cent of the animals immune to subsequent infection. Such a difference is suggestive of a mechanism of immunity other than that induced by the parenteral inoculation of virus. It is entirely possible that the virus-inactivating substances present in nasal secretions[82, 83] and tissue alterations in the respiratory tract following infection[84–86] are important factors in the mechanism of resistance.

Pandemic Influenza

The cause of the disastrous world-wide pandemics of influenza is not known, nor is there any sound basis for predicting when another pandemic may occur. Certainly, the epidemiologic behavior of pandemic influenza has been quite different from that of the more frequent outbreaks of influenza A or B, and the incidence of severe bacterial complications has been much higher. It seems probable that the primary inciting agent in pandemics is a virus, but whether that agent is a particularly virulent variant of influenza virus A or B or an entirely new virus, or both viruses A and B acting simultaneously, is an open question. It is also possible that pandemics result from the synergistic action of an influenza virus and one or more of the pathogenic bacteria of the respiratory tract. Whatever the cause, the discovery of the sulfonamide drugs and the antibiotic agents has provided more effective weapons for combating the deadly aspects of a pandemic — the secondary bacterial complications — than were ever available in the past.

The electron micrographs reproduced above were obtained through the kindness of D. G. Sharp, Ph.D., of Duke University School of Medicine, and J. W. Beard, M.D.

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MASSACHUSETTS MEDICAL SOCIETY

PROCEEDINGS OF THE COUNCIL

Stated Meeting, October 1, 1947

A STATED meeting of the Council was called to order by the president, Dr. Edward P. Bagg, Hampden, on Wednesday, October 1, 1947, at 10:30 a.m. in John Ware Hall, 8 Fenway, Boston. Two hundred and twenty-nine councilors (Appendix No. 1) were present.

After opening the meeting the President read the following obituaries:

WALTER PRENTICE BOWERS. — Since the May meeting of the Council, the life of Walter Prentice Bowers, which lacked but eight years of spanning a century, came to a peaceful end. Perhaps he will be remembered best as an outstanding example of the practitioner of medicine. For his accomplishments as such, at the age of eighty he was granted an honorary degree of Master of Arts by Harvard University, his Alma Mater in medicine.

Clinton, Massachusetts, more specifically will remember Walter Bowers as the home-town boy, son of the Baptist minister, who made good entirely on his merits; as a beloved physician; and as a leading citizen who, among other civic activities, founded the Clinton Hospital and served as president for half a century.

He served his state as well on the Board of Registration in Medicine, acting as secretary for nearly a decade. He did much to maintain and improve standards of medical practice in this capacity.

To Dr. Bowers the Massachusetts Medical Society must stand forever in debt because of his vision in advocating the purchase by the Society of the *Boston Medical and Surgical Journal* and for his able management in bringing that valued publication out of the shadow of bankruptcy to a solvent state and to a position of national recognition. In addition, he, the perennial councilor, guided the Massachusetts Medical Society with distinction as president from 1912 to 1914, and he never once lost sight of its best interests.

Only his close friends knew of Uncle Walter's substantial though unheralded kind deeds to students and to young professional colleagues, but one and all must agree that Emerson might have had Walter Prentice Bowers in mind when he wrote, "The world is upheld by the veracity of good men; they make the earth wholesome."

ROBERT NASON NYE. — Today the *New England Journal of Medicine* enjoys a preferred status among students of medicine old and young, no matter where the healing art has called them; in prospect, in practice or in teaching and research, just as in wartime, the accurate and authoritative information bound within the modest white covers followed them everywhere from Arctic snows to steaming tropical jungles. Already we have dealt with the passing in the fullness of years of Walter Bowers, the inspired editor who laid the groundwork for this notable achievement.

By a tragic coincidence, the sad duty devolves upon us to record at this same session the untimely completion of such mortal data as concern the life of Robert Nason Nye, who brought to fruition the fondest dreams of his predecessor in the management of the *Journal*.

Of Robert Frost, our New England poet, a wise critic wrote that, "Truth has been his central passion."* The poet himself declared that, "The fact is the sweetest dream that labor knows"; furthermore, in a philosophic mood, he continued:

> And were an epitaph to be my story
> I'd have a short one of my own.
> I would have written of me on my stone:
> I had a lover's quarrel with the world.

That is to say, "he held himself free to question the world, even to criticize, but always with understanding and real feeling."

Such a brief summary would describe the spirit of Robert Nye as accurately as that of Robert Frost. But in addition, Bob Nye graduated from Harvard *cum laude*, whereas the other Bob left at the end of two years. And though the poet managed the rock-bound farm after a fashion, the pathologist, turned editor, evinced so positive an aptitude for business management that credit balances have resulted for our publication. Both men of letters united their avocations and their vocations, "as their two eyes made one in sight." Both were sensitive observers of the world about them, whether the phenomena were natural or human.

Only yesterday, it seems, Bob came seeking a sufficient advance to cover the purchase of next year's paper, and for confirmation of the accuracy of an editorial. Today his chair stands vacant, his blue pencil lying where it left his hand.

The world of medical publication will miss the exemplary work of the perfectionist, Dr. Robert Nye. Likewise will the Massachusetts Medical Society feel the absence of his sound advice and cheerful co-operation in special committee work. But we who have known him and worked with him will miss still more the genial personality. We who have taken Bob Nye for granted for so long confess our deep dismay in the contemplation of replacement of this able man who met his ultimate deadline on the tenth of September.

The inspiration of lives such as these must persist and spur us on to keep our standards high, and relations with our fellows human. May the "Peace that passeth all understanding" reward their several labors.

At the request of the President, the Council stood for one minute in silent tribute to the memory of Dr. Bowers and Dr. Nye.

The Secretary presented the record of the annual meeting of the Council, held on May 19, 1947, as published in the *New England Journal of Medicine*, issue of August 21, 1947, and moved its acceptance. The motion was seconded by Dr. Harold G. Giddings, Middlesex South, and it was so ordered by vote of the Council.

APPOINTMENTS

The President then announced the following interim appointments:

To the Committee to Study Special Services:

Dr. Elmer S. Bagnall, Essex North, and Mr. Reginald F. Cahalane, representing Massachusetts Hospital Service.

*Untermeyer, L. Introduction and commentary. *Pocket Book of Robert Frost's Poems*. 263 pp. New York: Pocket Books, Inc., 1946. P. 12.

Dr. Arthur W. Allen, Suffolk, and Dr. Charles G. Hayden, Norfolk, representing Massachusetts Medical Service.
Mr. Frank E. Wing, Rev. Donald A. McGowan and Dr. Charles F. Wilinsky, Suffolk, representing Massachusetts Hospital Association.
Dr. Merrill C. Sosman, Suffolk, and Dr. Hugh F. Hare, Middlesex South, representing the specialty of radiology.
Dr. G. Kenneth Mallory, Norfolk, and Dr. Donald A. Nickerson, Middlesex East, representing the specialty of pathology.
Dr. Urban H. Eversole, Norfolk, and Dr. Sidney C. Wiggin, Suffolk, representing the specialty of anesthesiology.
Dr. Leland S. McKittrick, Suffolk, chairman, and Dr. Joseph Garland, Suffolk, secretary, representing the Massachusetts Medical Society.

To the Subcommittee on National Legislation:
Dr. Charles G. Hayden, Norfolk.

To the Committee on Postgraduate Medical Education:
Dr. Leo F. King, Middlesex North.
Dr. Claude E. Welch, Suffolk.

To the Committee on New England Postgraduate Assembly:
Dr. Joseph Garland, Suffolk.

To the Committee to Survey Salaries:
Dr. Albert A. Hornor, Suffolk.

As Advisory Council to the Woman's Auxiliary of the Massachusetts Medical Society:
Dr. John F. Conlin, Suffolk, chairman.
Dr. Milton J. Quinn, Middlesex East.
Dr. David L. Belding, Norfolk South.

To the Committee on School Health:
Dr. Kenneth L. Maclachlan, Middlesex East.

*Delegates (June 1, 1947, to June 1, 1949)**:

Delegates	Alternates
Dr. Charles J. Kickham, Norfolk.	Dr. John Fallon, Worcester.
Dr. Leland S. McKittrick, Suffolk.	Dr. Harold R. Kurth, Essex North.
Dr. Patrick J. Sullivan, Berkshire.	Dr. Allen G. Rice, Hampden.

Delegate to Annual Meeting of the Vermont State Medical Society:
Dr. Wilfred T. Hood, Middlesex South.

To Annual Meeting of House of Delegates of the American Medical Association, June, 1947:
Dr. Allen G. Rice, Hampden.

To the Council:
Dr. Walter L. Sargent, Norfolk South, to replace Dr. Reardon, *ex-officio*.
Dr. Robert S. Palmer, Norfolk, to replace Dr. Kickham, *ex-officio*.
Dr. Carl F. Maraldi, Suffolk, to replace Dr. Garland, *ex-officio*.
Dr. Leland S. McKittrick, Suffolk, to replace Dr. Nye, deceased.

Delegates to Veterans Administration Home Town Medical Care Program, November, 1947:
Dr. Humphrey L. McCarthy, Norfolk.
Dr. James K. Bragger, Norfolk.

To the Veterans Administration Board of Review:
Dr. Humphrey L. McCarthy, Norfolk.
Dr. James K. Bragger, Norfolk.
Dr. Timothy F. P. Lyons, Norfolk.
Dr. Edward P. Bagg, Hampden.
Dr. Joseph Garland, Suffolk.

*Advance necessitated by midyear meeting of House of Delegates of American Medical Association.

The President asked for confirmation of these appointments, and it was so ordered by vote of the Council.

Reports of Committees

Executive Committee — Dr. Joseph Garland, Suffolk, *Secretary*.

The Secretary submitted the report (Appendix No. 2) as distributed in mimeographed form and moved its acceptance. It was so ordered by vote of the Council.

Committee on Membership — Dr. Peirce H. Leavitt, Plymouth, *Chairman*.

This report had been distributed to the Executive Committee in mimeographed form and accepted by that committee with one amendment, as set forth in the report of the Executive Committee. Dr. Leavitt moved the acceptance of the report, the motion was seconded and it was so ordered by vote of the Council.

Committee on Public Relations — Dr. Harold R. Kurth, Essex North, *Secretary*.

This report (Appendix No. 3) was submitted by the President, who pointed out that the chief subject of contention in the report had to do with the Blue Shield policyholders' status as regards income. Dr. H. M. Kemp, Franklin, had indicated that little attempt was being made by Blue Shield to determine accurately an applicant's yearly income. Often a physician, aware that his patient's income is above the accepted $3000, is entitled to make extra charges, but finds that he cannot do so because the patient has been issued an unlimited instead of a limited policy.

Dr. N. S. Scarcello, Worcester, had offered the following resolution: "That the Blue Shield through its employees determine accurately an applicant's yearly earnings before issuing the policy, and secondly, that these earnings be reviewed each year." This resolution had been adopted by the Committee on Public Relations.

The Executive Committee recommended that the Council refer this matter back to the subcommittee appointed to investigate the relations between members of the Massachusetts Medical Society and the Blue Cross and Blue Shield, for further study and conference with Dr. Charles G. Hayden, medical director of the Blue Shield and Blue Cross.

In order that the matter might be discussed clearly and authoritatively the President had invited Dr. Charles G. Hayden and Dr. James C. McCann, president of Blue Shield, to attend this meeting of the Council. Dr. Bagg asked the Council, therefore, to give unanimous consent to Drs. Hayden and McCann to speak on the question. This consent was granted.

Dr. N. S. Scarcello, Worcester, spoke against returning the question to the committee, arguing strongly in favor of his original resolution adopted by the Committee on Public Relations that Blue Shield ascertain an applicant's yearly earnings and review them yearly. He then moved the adoption of the resolution. The motion was seconded.

Dr. James C. McCann, in discussing the resolution, mentioned the original close integration between the Council of the Society and the Blue Shield, which the Council had created — an integration that was apparently now lacking. He spoke at length on the difficulties of determining the income level that should separate limited from unlimited policies, and the difficulties and the cost of frequent appraisal of policyholders' incomes.

Dr. Charles G. Hayden indicated the economies that Blue Cross and Blue Shield are establishing in cutting their payrolls, thereby effecting savings that can be used for increased benefits to subscribers and to accumulate proper reserves as required by the Commissioner of Insurance.

Dr. Elmer S. Bagnall, Essex North, called attention to the fact that each district has a professional service committee established under the by-laws of the Blue Shield, and that in the Blue Shield is a central professional service committee. Each district has also a district administrative committee.

Dr. James P. O'Hare, Suffolk, agreed with Dr. Scarcello that the responsibility for determining the income of subscribers is not one that the physicians should assume.

After further discussion by Drs. John Fallon, Worcester, J. J. Curley, Worcester North, Charles G. Hayden, James C. McCann, C. C. Lund, Suffolk, and Frank R. Ober, Suffolk, Dr. Harold R. Kurth, Essex North, offered an amendment to Dr. Scarcello's resolution by suggesting that the whole problem of the question of income be referred back to the Subcommittee on Blue Cross and Blue Shield Problems of the Committee on Public Relations for further study after consultation with Dr. Charles G. Hayden. The motion was seconded by Dr. Bagnall, Essex North. Dr. Scarcello raised as a point of order the fact that the amendment controverted the resolution.

The point of order being upheld, the original motion was put to vote and failed of passage.

On motion of Dr. M. Fremont-Smith, Suffolk, seconded by Dr. F. R. Ober, Suffolk, the question was referred back to the committee for further study.

The President then called attention to the fact that establishment of a Woman's Auxiliary was under way, as reported to the Committee on Public Relations by Dr. Milton J. Quinn, Middlesex East.

On motion of Dr. J. V. McHugh, Worcester North, duly seconded, the report of the Committee on Public Relations was accepted by the Council as one of information only.

Committee on Legislation — Dr. George R. Dunlop, Worcester, *Chairman.*

This informational report, which is as follows, was presented by Dr. Dunlop:

> Since the last meeting of the Council, the Committee on Legislation met and authorized Dr. Elmer S. Bagnall to represent the Massachusetts Medical Society during the hearings on the Taft-Smith-Ball-Donnell Bill (S. 545) before the Subcommittee of the Senate Committee on Labor and Public Welfare. During the summer, Dr. Bagnall called the Subcommittee on National Legislation together for a study and discussion of S. 545 preceding his testimony before the Senate Committee. The bill was evaluated and measured by the basic principles governing medical-care plans as published by the Massachusetts Medical Society on February 6, 1946. It was recommended that: greater emphasis be placed upon public-health and community preventive medicine; a larger appropriation be allocated for research; greater powers be given to all advisory councils; and partial aid to those who could pay in part for their medical care be eliminated.
>
> On Wednesday, June 4, 1947, Dr. Bagnall testified before the Subcommittee on Labor and Public Welfare to the effect that the Massachusetts Medical Society favored the ultimate creation of a federal Department of Health at cabinet level, headed by a physician. In the light of the principles adopted by the Society for governing medical-care plans, he showed that S. 545 had certain strengths and certain weaknesses. Recommendations were made for clarification and strengthening the provisions in this bill. A copy of Dr. Bagnall's testimony is available under the reports of the hearings on this legislation.
>
> On June 5, 1947, the Senate Committee on Expenditures in the Executive Departments agreed to report on S. 140, as amended. It was the opinion of the Subcommittee on National Legislation of the Society that "if federal activities in the field of public health are to be elevated to cabinet level, they should not be combined with education, security, or any other field." Senator Taft, himself, believed that health was too important to be combined with welfare and education.
>
> Congress adjourned without any action on the bill, and as the Social Security Board is to be investigated, favorable action on the bill in its present form seems unlikely.
>
> House Bill 705 which later became House Bill 1921 was finally rejected by the Massachusetts House of Representatives on June 19, 1947. This bill prohibited the employment in schools of persons suffering from tuberculosis in communicable form, and provided for periodic examination of school employees.
>
> House Bill 274, providing for an appointment of a special commission to investigate and study the public-health laws and policies of the Commonwealth was combined with H. 1870 and H. 2137 to become H. 2338. This latter was enacted and signed by the Governor on June 30, 1947.
>
> It might be important to note that during the year 1947–1948, all petitions to come before the General Court must be filed on or before the first Wednesday in December. Petitions after this date will have to come before the Rules Committee.

Dr. Dunlop moved the acceptance of the report, the motion was accepted, and it was so ordered by vote of the Council.

Committee on Arrangements — Dr. G. Guy Bailey, Jr., Middlesex South, *Chairman.*

This informational report, which is as follows, was presented by the President in the absence of Dr. Bailey:

> The Committee on Arrangements reports that it has selected the dates of May 25, 26 and 27, 1948, for the annual meeting of the Society, and has selected the Hotel Statler in Boston as the place of the meeting.

It is the plan of this committee to try to encourage more and better scientific exhibits at next year's meeting, and a section of the foyer has been set aside for this purpose.

Dr. A. A. Hornor, Suffolk, moved the acceptance of the report. The motion was seconded, and it was so ordered by vote of the Council.

Committee on Finance — Dr. Robert W. Buck, Suffolk, *Chairman.*

This report, which contains two recommendations, was presented by Dr. Buck as follows:

The Committee on Finance has approved additional expenditures amounting to $300 to cover the cost of dinner meetings of two committees.

The Finance Committee has also voted to approve the suggestions made by the treasurer of the Society, Dr. Eliot Hubbard, as found in the report of the Executive Committee of the Council, February 5, 1947. Dr. Hubbard suggested that if the annual dues were raised to $25.00, he would like to make the following recommendations:

"1. That the refund to district societies be increased from $4000 a year to $8000."

The Committee on Finance approves this suggestion and recommends its adoption.

"2. That the total amount of the assets of the General Fund be set at $250,000, and not be increased each year by reinvestment of surplus, and that in any given year, after running expenses have been paid and aid to the Boston Medical Library and other beneficiaries given, the balance of income over expenditures be automatically turned over to the Building Fund. This fund so augmented would assure the purchase of adequate headquarters at the proper time and would allow for a Building Fund endowment, the income from which would support the running of this establishment."

The Finance Committee approves this suggestion and recommends its adoption.

Dr. Buck moved the acceptance of the report as a whole. The motion was seconded, and it was so ordered by vote of the Council.

Dr. Buck then moved the adoption of the first recommendation, which is that the refund to district societies be increased from $4000 to $8000 yearly, after the annual dues have been increased. The motion was seconded, and it was so ordered by vote of the Council.

Dr. Buck moved the adoption of the second recommendation as printed above. The motion was seconded and it was so ordered by vote of the Council.

Committee on Cancer — Dr. Shields Warren, Suffolk, *Chairman.*

This report, which contains one recommendation, was presented by Dr. Allen G. Rice, Hampden, and is as follows:

The Palmer Memorial Unit of the New England Deaconess Hospital has asked approval of the Suffolk District Medical Society for the establishment of a Cancer Detection Clinic. In view of the special character of the problem this request was turned over to the Committee on Cancer by the Suffolk District Medical Society.

The Committee recommends that the request of the New England Deaconess Hospital for the establishment of a Cancer Detection Clinic be approved.

It is well for members of the Society to be aware of the wide opportunities that exist for funds for cancer research and for cancer education. The United States Public Health Service has made available to each approved medical school a sum up to $25,000 for the teaching of cancer. The budget of the United States Public Health Service approved by the last Congress carried a $14,000,000 item for work in the field of cancer, chiefly along the lines of education and research.

The Massachusetts Division, Inc., of the American Cancer Society has raised approximately $358,000 this year, and the American Cancer Society in its nation-wide campaign has raised $11,500,000. The grants made in the Commonwealth by the national society have been chiefly on a research-grant basis, and hence, largely restricted to metropolitan areas. The Massachusetts Division, Inc., of the American Cancer Society has a much more intimate knowledge of the situation that exists within the state, and consequently has been able to make a far wider distribution of its funds. Support of research, service or education has been carried out in the following communities: Boston, Brockton, Brookline, Cambridge, Fall River, Lowell, Pittsfield, Springfield, Westfield, Worcester and Wrentham.

Dr. Rice moved the acceptance of the report as a whole. The motion was seconded by Dr. F. R. Ober, Suffolk. Dr. Bagg then asked the consent of the Council to permit Dr. Clifford C. Franseen to discuss the proposed Cancer Detection Clinic and answer any questions that councilors might have concerning it. This consent was unanimously granted.

Dr. Franseen explained that according to recommendations of the American Cancer Society and the American College of Surgeons, the approval of the County Medical Society must be obtained before such a clinic is established. In this instance, because of a special situation, the Suffolk District Society had turned the request over to the Committee on Cancer, which presented it to the Council for approval. The special situation was that the Massachusetts Department of Public Health had funds available from a federal grant to subsidize this clinic for cases in which the patient could not pay the full fee.

In the discussion that followed it became apparent that the Council was not convinced that the organization of the clinic had yet reached a stage where the Council was ready to give its approval.

Dr. N. S. Scarcello, Worcester, moved that the recommendation be tabled until the plans for the clinic had been completely worked up, when it could be reintroduced to the Council. This motion was seconded, and it was so ordered by vote of the Council.

Committee on Physical Medicine — Dr. Arthur L. Watkins, Middlesex South, *Chairman.*

This report, which contains three recommendations requested by the Massachusetts Department of Education regarding establishing standards of training and education in the field of physiotherapy, was presented by Dr. Watkins and is as follows:

This committee, on April 30, 1947, had referred to it by Dr. John F. Wostrel, supervisor of private trade schools, Department of Education, Commonwealth of Massachusetts, a request for aid in establishing standards of training and education for the teaching staffs of licensed

private trade schools in the field of physiotherapy. These schools are not approved by the American Medical Association and do not operate on the level required by the American Medical Association.

In reply to this request the following recommendations are made:

1. The technical director of a school of physical therapy should be certified by the American Registry of Physical Therapy Technicians and have a minimum of five years' experience as a physical therapist, working in clinics or hospitals employing other registered physical therapists.
2. Assistant directors or instructors should be certified by the American Registry of Physical Therapy Technicians and have two years' experience in a hospital or clinic employing other registered physical therapists.
3. It is further recommended that the minimum requirement for entrance to all licensed trade schools in the field of physical therapy (physiotherapy) include two years of college with courses in the basic sciences or, in case high-school graduates are admitted, there should be a minimum of two academic years of college level including courses in basic sciences.

Dr. Watkins moved that the recommendations as published be adopted. The motion was seconded by Dr. Bagnall, and it was so ordered by vote of the Council.

Dr. Watkins then moved the acceptance of the report as a whole. The motion was seconded by Dr. Bagnall, and it was so ordered by vote of the Council.

Committee to Meet with General Hawley — Dr. Humphrey L. McCarthy, Norfolk, *Chairman.*

This informational report (Appendix No. 4), containing the agreement entered into between the Massachusetts Medical Society and the Veterans Administration in accordance with the Kansas Plan, was presented by Dr. Bagg in the absence of Dr. McCarthy.

The acceptance of this report and the approval by the Council of a board of review to be nominated by the President according to Section 9 of the agreement were moved by Dr. Hornor. The motion was seconded by Dr. Ober, and it was so ordered by vote of the Council.

Committee to Survey Malpractice Insurance in Massachusetts — Dr. Carl Bearse, Norfolk, *Chairman.*

This report (Appendix No. 5), which contains four recommendations, was presented by the chairman, who moved the adoption of the first recommendation, that the Massachusetts Medical Society should not undertake its own liability insurance at this time.

The motion was seconded by Dr. Hornor, and it was adopted by vote of the Council.

Dr. Bearse moved the adoption of the second recommendation, that no one insurance company be recommended exclusively at this time. The motion was seconded by Dr. Ober, and it was adopted by vote of the Council.

Dr. Bearse then moved the adoption of the third recommendation, that a special committee of five fellows be appointed by the President to act in an advisory capacity to the Society and insurance companies in regard to malpractice insurance. The motion was seconded by Dr. Bagnall, and after some discussion it was so ordered by vote of the Council.

Dr. Bearse moved the adoption of the fourth recommendation, that the present committee be discharged. This motion was seconded by Dr. Hornor and was adopted by vote of the Council. Dr. Bearse then moved the acceptance of the report as a whole, the motion was seconded, and it was so ordered, with thanks, by vote of the Council.

Committee on New England Postgraduate Assembly — Dr. Leroy E. Parkins, Suffolk, *Chairman.*

This report, of progress only, was presented by the chairman and is as follows:

The Committee invited the other New England state medical societies to participate in organizing an assembly; all accepted and appointed members to a joint executive committee.

A program committee was appointed representing all the societies, the program is being published in the *Journal,* and a copy will be mailed to each registered physician in New England.

The Assembly will be held October 29 to 31, 1947.

Dr. Parkins moved its acceptance. This motion was seconded by Dr. Hornor, and it was so ordered by vote of the Council.

Committee to Establish a Pension Plan — Dr. Robert W. Buck, Middlesex South, *Chairman.*

This report (Appendix No. 6) was presented by the chairman.

In offering the report, Dr. Buck stated that the committee wished to amend its recommendations so that a pension of 50 per cent of the salary at the time the insurance is written, instead of the average salary, be provided as a goal. If the recipient is granted increase in wages between the time he becomes eligible and the time he reaches the retirement age, proportionate increases in benefits must be added to the terms of the policy, but in no case, irrespective of the age at the time the policy is written, is the final monthly pension payment to be more than $200.

Dr. Buck then moved the adoption of the recommendation as amended, the motion was seconded by Dr. Chapin and it was so ordered by vote of the Council.

Dr. Buck moved the acceptance of the report as a whole, the motion was seconded and it was so ordered by vote of the Council.

Advisory Committee on School Medical Services — Dr. Stewart H. Clifford, Middlesex South, *Chairman.*

This report (Appendix No. 7) was offered by the President. After some discussion of the difficulties that the Committee had encountered in its deliberations, Dr. Bagnall moved that the recommendation of the Executive Committee that the report

be referred back to the committee for further study be adopted. The motion was seconded and it was so ordered by vote of the Council.

Report of the Massachusetts Representatives to the House of Delegates of the American Medical Association.

This report (Appendix No. 8) prepared by Dr. David D. Scannell, Norfolk, was submitted by the President. Its acceptance was moved by Dr. Hornor, the motion was seconded, and it was accepted by vote of the Council.

Committee to Study Special Services — Dr. Leland S. McKittrick, Suffolk, *Chairman.*

The report of this committee (Appendix No. 9) was read by the Secretary. Its acceptance was moved by Dr. Hornor and seconded by Dr. Ober.

Dr. George L. Schadt, Hampden, in discussion, moved that a preamble be attached to the report designating it as an interim report until it could be more fully studied by the societies of radiologists, pathologists and anesthetists, and a final agreement reached.

In the course of the discussion that followed, Dr. Bagg made it clear that the above-named societies, the hospital associations, the Blue Cross and the Blue Shield were represented on the committee, and that the committee was unanimously behind the report.

After further discussion the amendment was put to vote and was not accepted, and the report, being put to vote, was unanimously accepted by the Council, and the committee was discharged.

The Secretary read a communication from Mrs. Robert N. Nye, expressing her appreciation for the flowers that had been sent in the name of the Society to Dr. Nye's funeral services. He went on to tell of the gifts of money that had been received by the Massachusetts Division of the American Cancer Society in memory of Dr. Nye, in lieu of flowers, and of the opportunity that existed of adding to this memorial fund.

New Appointments

The following new appointments were then offered by the President and were confirmed by vote of the Council:

To the Advisory Committee on Malpractice Insurance:

Dr. Carl Bearse, Norfolk, Chairman.
Dr. William J. Brickley, Suffolk.
Dr. Maurice Fremont-Smith, Suffolk.
Dr. Guy L. Richardson, Essex North.
Dr. Horatio Rogers, Suffolk.

To the Committee of Seven:

Dr. Reginald Fitz, Suffolk, Chairman.
Dr. Frank B. Carr, Worcester.
Dr. W. A. R. Chapin, Hampden.
Dr. Lawrence R. Dame, Franklin.
Dr. Peirce H. Leavitt, Plymouth.
Dr. Dwight O'Hara, Middlesex South.
Dr. Walter G. Phippen, Essex South.

New Business

The following letter to the President was read by the Secretary:

Dear Dr. Bagg:

There is one matter in connection with my administration as president of the Massachusetts Medical Society that I feel has been left in the category of unfinished business, and I feel that I should call it to your attention specifically on this account.

The matter of establishing the secretaryship of the Society on a full-time basis was discussed frequently at the meetings of the Committee of Seven during 1945 and 1946. It was brought before the Council by Dr. Ober's special committee and accepted in principle at the meeting of February 5, 1947. You will remember that we talked it over before you approached Dr. Tighe on the subject the last time he was at the society headquarters. In spite of all this priming, somehow there did not seem to be a suitable way to bring it before the Council at the annual meeting and so it has gone on.

My feeling that we need a full-time secretary is very strong and my experience during the period of Dr. Tighe's illness and absence confirms this feeling in a most conclusive manner. There are, furthermore, matters which should be kept on record in connection with the annals of the Society which have been and are being forgotten every day. Dr. Burrage's history stopped twenty-five years ago and it seems to me that the activities of the Society during the past quarter-century transcend all previous work and should be recorded before our generation completely passes away. I furthermore believe there is a vital need for more accounts of the work of the thirty-odd committees of the Society to be published in the *New England Journal of Medicine* because it is only by such publication that the fellows as a whole have an opportunity to know what is being done and what is being thought. There are, of course, other reasons with which I know you are familiar.

The real purpose of my writing this letter is to place formally in your hands my belief in the need and my hope that some way may be worked out for the action which will lead to the suitable arrangement for a full-time secretary for the Massachusetts Medical Society.

With all good wishes, I am

Dwight O'Hara, M.D.

Dr. O'Hara, after a few explanatory remarks, moved that the President be asked to nominate a Committee of Seven to consider the matter of a full-time secretaryship, with power to act, to report to the Council at its next meeting. Dr. Fremont-Smith seconded the motion. Dr. Hornor offered as an amendment, which was accepted by Dr. O'Hara, that the committee also have the power to determine the salary it might offer.

Dr. Bagg suggested that the committee should also define the fields of Secretary and Executive Secretary and Director of Information so that there will be no overlapping of functions.

The question was put to vote and the motion was accepted by the Council.

The following letter to the President was then read by the Secretary:

Frequent calls for the recommendation of names of physicians for the treatment of patients throughout the state continue to come into the main office of the Society.

In our experience the present method of referring such inquiries to the secretary of the proper district society is cumbersome and too dilatory.

Hence, I would like to suggest that the matter be reopened and referred once more to the appropriate committee for further study in order to provide better service to the public.

Joseph Garland, M.D., *Secretary*

As recommended by the Executive Committee, this matter was referred to the Committee on Public Relations by vote of the Council.

The following communication from the trustees of the Boston Medical Library was read by the Secretary for purposes of information:

Dear Dr. Garland:

As secretary of the Boston Medical Library, I acknowledge with great pleasure your letter dated June 1, 1947, informing me of the action taken by the Council of the Massachusetts Medical Society with respect to the Boston Medical Library.

In accordance with this action, the Trustees of the Boston Medical Library have voted to propose changes in their by-laws, to be acted upon at a special meeting of the Corporation on November 17, 1947, whereby a new class of membership in the Boston Medical Library, to be known as Massachusetts Medical Society Member, will be created. Any non-resident fellow of the Massachusetts Medical Society, active or retired, as long as he remains in good standing after January 1, 1948, will automatically be in this class. He will be given the same privileges as other members, including, of course, the taking out of books and periodicals. Another change in the by-laws which has been proposed will be the addition of four trustees, to be appointed by the Massachusetts Medical Society. A copy of these revised by-laws will be sent to you after their adoption by the Corporation.

It is hoped that in this way a closer co-operation of the activities of the Massachusetts Medical Society and the Boston Medical Library will be effected.

BENJAMIN CASTLEMAN, M.D., *Secretary*

Dr. L. E. Parkins, Suffolk, offered the resolution that the Committee on Postgraduate Assembly be directed to enter into discussions with the Assembly representatives of the other New England states, as well as with the Council of New England state medical societies, for the purpose of setting up an organization to carry on the future work of the Assembly, and that after such an organization had been agreed upon by the committee it be reported to the Council for final approval.

The resolution was seconded and was accepted by vote of the Council.

The following communication was read by the Secretary, who moved its referral to the proper committee:

The accompanying letter concerns a special project for the medical care of children of veterans at Harvard University. This matter was presented to me during the summer as one approved by the State Department of Public Health and a plan about to be placed in operation with the opening of the school year.

The sponsors have shown every effort to obtain the approval of the Massachusetts Medical Society in advance of the plan's operation. This has not been possible under our By-Laws.

I offer this matter as an item of new business for referral for study by the appropriate committee. I will be at the service of the committee for whatever additional information it may require.

JOHN F. CONLIN, M.D.
Director of Medical Information and Education

Dear Dr. Conlin:

This letter is to confirm our telephone conversation relative to obtaining official approval by the Massachusetts Medical Society of a special project for the care of children of veterans at Harvard University.

During the past winter several medical problems arose among the children of veterans at Harvard that gave cause for concern by those in medically responsible positions at Harvard and at Harvardevens Village.

The veteran students in general were on small government stipends not allowing for adequate medical care for their children. Arlie V. Bock, M.D., requested Allan M. Butler, M.D., to see if he could devise some means whereby such care could be provided. Dr. Butler consulted Gerald N. Hoeffel, M.D., Dorothea M. Moore, M.D., and Ralph A. Ross, M.D., pediatricians of Cambridge who were caring for many of the children in this area, and Al Weller, M.D., of Arlington who was caring for a group at Harvardevens. These physicians confirmed the need of some type of medical aid and indicated that they were carrying a heavy case load without adequate compensation for services rendered. Inquiries indicated that Government funds could be made available from the Children's Bureau via the Massachusetts Department of Public Health via the State Division of Maternal and Child Welfare, provided it be done as a study as well as a service project.

The request for such funds was submitted as follows:

The purpose of this project is to give medical care for children of G. I.'s who are on small Government stipends at Harvard and at Fort Devens. These students come from many states other than Massachusetts. There will be no economic or racial determination of eligibility and no other limiting factor. It will be sponsored by Massachusetts General Hospital. The Child Health service will notify the G. I. students concerning the availability of the service and will give them exact information as to how to secure this service.

The service to these children will be given through child health conferences, pediatric and consultation service in the home, out-patient care at the Massachusetts General Hospital and hospital medical and surgical care at the Massachusetts General and other qualified hospitals. The special diagnostic and treatment services at the Massachusetts General will be available to this child health service. The Massachusetts General Hospital provides unusually good facilities staffed by personnel with the highest professional qualifications and used as a teaching hospital by the Harvard School of Public Health. It is licensed by the Massachusetts Department of Public Health. Harvard University will furnish office space at Harvard and conference space and facilities both in Cambridge and at Fort Devens.

Consultation service in the homes will be given through practicing pediatricians who are licentiates of the American Board of Pediatrics. The cost will be $10.00 per home visit.

All physicians will be licensed to practice in Massachusetts. There will be also a part-time medical director.

He will be a senior pediatrician who is a licentiate of the American Board of Pediatrics, a member of the Staff of the Children's Medical Service, Massachusetts General Hospital, and a member of the Department of Pediatrics of Harvard or Tufts University.

The two full-time pediatricians will be graduates of a Grade A medical school and will have had an internship and one or more residencies which meet the qualifications of the American Board of Pediatrics.

Consultants will be physicians who are licentiates of the American Board covering their particular field of specialty.

The public-health nurses meeting the qualifications of the supervisory nurse of the Massachusetts Department of Public Health will be employed under the supervision of the Bureau of Public Health Nursing of the Massachusetts Department of Public Health. They will do generalized service for the entire family.

Nutrition and medical social consultation will be available through the Massachusetts Department of Public Health.

Consultation service will also be available through the Division of Maternal and Child Health.

Two full-time clerks will be employed.

There are at present, at Harvard, 1412 children of G. I.'s This total number will increase during the year due to approximately 350 pregnancies. Therefore, we base our request for funds on 1500 children at a cost of $35.00 per child.

The operation of this service provides an excellent opportunity for statistical analysis of this type of care and for study of administrative problems. For this purpose, a principal statistical clerk, a statistical machine operator and rental of statistical machine, equipment and supplies are essential. The Harvard School of Public Health will participate in the statistical analysis of this type of care and in study of administrative problems. The cost of such analysis is budgeted separately from the cost of providing the actual health and medical care.

Quarterly reports of services rendered will be made to the Division of Maternal and Child Health covering the number of children receiving each type of service including attendance at well child conferences, home visits, consultant visits in the home, number of outpatient visits and number of hospital days' care per child, with diagnosis and types of treatment. These forms will be submitted when available.

There is every reason to believe that there will be the same need of child health services next year. A request to continue this service should, therefore, be anticipated.

The funds were made available to the State of Massachusetts to be administered by the Massachusetts General Hospital. Harvard University has agreed to supply office and clinic space and will furnish both with such furniture as is appropriate for the needs of the project.

At conferences held with representatives of the Children's Bureau of the State Division of Maternal and Child Health and with representatives of Cambridge public-health services it has been emphasized that official approval of the medical profession be obtained before proceeding further.

FRANCIS C. McDONALD, M.D.

The motion was seconded and carried, and the communication was referred by the President to the Committee on Medical Education.

The following communication was read by the Secretary, who moved its referral to the proper committee:

Dear Dr. Garland:

I am writing to bring the following matter to the attention of the Officers and Council of the Massachusetts Medical Society.

The Committee on Fetus and Newborn of the American Academy of Pediatrics is working out a program to improve the facilities for the care of newborn infants which will include medical, nursing and hospital care, medical social services and the need for training of personnel.

In an effort to activate this program at the State and eventually at the local level, Dr. Stewart H. Clifford, the Chairman of the Committee, with the approval of the Executive Board of the Academy, has requested the State Chairmen to appoint a State committee on Fetus and Newborn. Dr. Clement A. Smith has agreed to act as chairman of such a committee in Massachusetts. Eleven other physicians interested in this problem have been invited to serve on the committee.

The program developed by the National Committee will be presented in detail at the annual meeting of the American Academy of Pediatrics on December 8, 1947, in Dallas, Texas. It is hoped that the Massachusetts committee will begin to function after that time and that eventually there will be local committees to carry out the details of the program in the state.

It is the intention of the American Academy of Pediatrics that this program be carried out with the approval and co-operation of the State Medical Societies.

JAMES MARVIN BATY, M.D.
State Chairman for Massachusetts,
American Academy of Pediatrics

This motion was seconded and carried, and the communication was referred by the President to the Committee on Medical Education.

Dr. B. C. Wheeler, Worcester, then proffered the following invitation from the Worcester District Medical Society:

Mr. President, on behalf of the Worcester District Medical Society, I should like to present a cordial invitation to hold the 1949 annual meeting of this Society in Worcester. It will then have been eleven years since the last annual meeting in Worcester and the Worcester District Medical Society would consider it an honor and a privilege to act as host again. This is pursuant to a unanimous vote of the regular monthly meeting of our District Society held on September 10, 1947.

Dr. O'Hara moved that the invitation be accepted with gratitude and referred to the Committee on Arrangements. This motion was seconded by Dr. Hornor, and it was so ordered by vote of the Council.

There being no further business before the Council, the President announced it adjourned at 1:50 p.m.

JOSEPH GARLAND, *Secretary*

APPENDIX NO. 1

ATTENDANCE OF COUNCILORS

BARNSTABLE
P. P. Henson
J. G. Kelley
J. I. B. Vail

BERKSHIRE
Helen M. Scoville
P. J. Sullivan
E. R. Wyman

BRISTOL NORTH
J. V. Chatigny
W. E. Dawson
M. E. Johnson
J. L. Murphy
W. M. Stobbs

BRISTOL SOUTH
G. W. Blood
R. B. Butler
E. D. Gardner
R. H. Goodwin
William Mason
H. E. Perry
C. C. Tripp
Henry Wardle

ESSEX NORTH
H. M. Allen
E. S. Bagnall
R. V. Baketel
G. J. Connor
Elizabeth Councilman
H. F. Fenton
H. R. Kurth
P. J. Look
L. C. Peirce
G. L. Richardson
F. W. Snow

ESSEX SOUTH
Bernard Appel
W. W. Babson
L. F. Box
S. E. Goulding
C. A. Herrick
W. R. Irving
P. P. Johnson
A. E. Parkhurst
W. G. Phippen
E. D. Reynolds
H. D. Stebbins
P. E. Tivnan
C. F. Twomey

FRANKLIN
L. R. Dame

HAMPDEN
F. A. Allen
E. P. Bagg
R. L. Barrett
W. A. R. Chapin
E. C. Dubois
A. F. G. Edgelow
Frederic Hagler
G. D. Henderson
Charles Jurist
R. T. Miller
A. G. Rice
A. H. Riordan
G. L. Schadt
J. A. Seaman

HAMPSHIRE
H. A. Tadgell

MIDDLESEX EAST
J. L. Anderson
T. P. Devlin
Robert Dutton
E. M. Halligan
D. L. Joyce
R. W. Layton
K. L. Maclachlan
M. J. Quinn
R. R. Stratton

MIDDLESEX NORTH
R. E. Cole
W. E. Collins
S. A. Dibbins
A. J. Stewart

MIDDLESEX SOUTH
E. W. Barron
Harris Bass
J. M. Baty
H. K. Bloom
G. F. H. Bowers
Aliee M. Broadhurst
Madelaine R. Brown
R. H. Brown
R. W. Buck
E. J. Butler
J. F. Casey
E. A. Cooney
J. A. Daley
J. G. Downing
A. G. Engelbach
H. Q. Gallupe
F. W. Gay
V. A. Getting
H. G. Giddings
J. D. Golden
Eliot Hubbard, Jr.
F. R. Jouett
S. B. Kelley
A. A. Levi
A. N. Makechnie
J. H. McSweeney
Dudley Merrill
C. E. Mongan
E. J. O'Brien, Jr.
Dwight O'Hara
Fabyan Packard
Randolph Piper
E. W. Small
A. W. Stearns
H. P. Stevens
J. B. Townsend
J. E. Vance
A. L. Watkins
B. M. Wein
R. H. Wells
Hovhannes Zovickian

NORFOLK
A. A. Abrams
C. M. Allard
B. E. Barton
Carl Bearse
Elizabeth Broyles
J. H. Cauley
G. L. Doherty
Albert Ehrenfried
J. M. Faulkner
Susannah Friedman
D. L. Halbersleben
H. B. Harris
Gilbert Horrax
P. J. Jakmauh
I. R. Jankelson
C. J. Kickham
D. L. Lionberger
D. S. Luce
F. P. McCarthy
F. J. Moran
H. R. Morrison
Hyman Morrison
D. J. Mullane
H. A. Novack
J. J. O'Connell
W. R. Ohler
G. W. Papen
H. A. Rice
S. A. Robins
D. D. Scannell
J. A. Seth
J. A. Sieracki
S. L. Skvirsky
E. C. Smith
J. W. Spellman
A. R. Stagg
N. A. Welch
P. R. Withington
Marjorie Woodman
E. T. Wyman

NORFOLK SOUTH
F. A. Bartlett
D. L. Belding
Harry Braverman
R. L. Cook
Frederick Hinchliffe
E. K. Jenkins
N. R. Pillsbury
R. G. Vinal

PLYMOUTH
A. L. Duncombe
P. H. Leavitt
C. D. McCann
R. C. McLeod
G. A. Moore
B. H. Peirce
E. L. Perry

SUFFOLK
H. L. Albright
T. J. Anglem
C. H. Bradford
W. A. Browne
A. M. Butler
A. J. A. Campbell
E. M. Chapman
Henry Clifford
A. P. Der Hagopian
N. W. Faxon
Reginald Fitz
Maurice Fremont-Smith
Channing Frothingham
Joseph Garland
G. L. Gately
John Homans
A. A. Hornor
L. M. Hurxthal
H. A. Kelly
T. H. Lanman
C. C. Lund
C. F. Maraldi
F. W. Marlow, Jr.
Donald Munro
F. R. Ober
F. W. O'Brien
J. P. O'Hare
L. E. Parkins
L. E. Phaneuf
Helen S. Pittman
J. H. Pratt
J. J. Regan
W. H. Robey
Horatio Rogers
H. F. Root
C. M. Stearns
Augustus Thorndike
Conrad Wesselhoeft

WORCESTER
A. W. Atwood
George Ballantyne
F. T. Bousquet
F. B. Carr
E. J. Crane
G. R. Dunlop
G. J. Elliott
John Fallon
H. L. Kirkendall
D. K. McClusky
J. M. Olson
F. A. O'Toole
N. S. Scarcello
J. J. Tegelberg
G. C. Tully
R. J. Ward
B. C. Wheeler

WORCESTER NORTH
J. J. Curley
C. B. Gay
J. C. Hales
G. P. Keaveny
J. V. McHugh
C. S. McPeak

APPENDIX NO. 2

REPORT OF THE EXECUTIVE COMMITTEE

The Executive Committee of the Council met on September 3, 1947, in Sprague Hall, 8 Fenway, Boston, Massachusetts, at 4:00 p.m. Dr. Edward P. Bagg, president of the Society, presided. Present were Dr. Daniel B. Reardon, president-elect, Dr. Charles J. Kickham, vice-president, Dr. Eliot Hubbard, treasurer, and representatives from all the district societies except Barnstable, Berkshire, Hampshire and Worcester.

The record of the meeting of April 23, as presented at the annual meeting of the Council on May 19, 1947, was submitted by the Secretary and was approved.

COMMITTEE REPORTS

Committee on Membership

The report of the meeting of August 13, 1947, as circulated in mimeographed form, was considered by sections and approved with one correction.

Committee to Study Special Services

President Bagg, in commenting on the appointment of this committee, pointed out that the members representing the various associations were all approved by those associations, so that whatever decisions were arrived at might be considered as authoritative.

The report, which had been distributed in mimeographed form with the Circular of Advance Information, was read by the Secretary, and its acceptance is recommended by the Executive Committee.

Considerable discussion took place on the statement by Dr. Kemp, Franklin, on the failure of Blue Shield to determine accurately an applicant's yearly income, and the resolution offered by Dr. Scarcello, Worcester, "that the Blue Shield through its employees determine accurately an applicant's yearly earnings before issuing the policy, and secondly, that these earnings be reviewed each year."

The difficulties and the cost of determining these facts were brought out, and it was stated that the physician interviewing a patient can easily ascertain his income and so report to the Blue Shield.

The Executive Committee recommends that the Council refer this matter back to the subcommittee appointed to investigate the relations between members of the Massachusetts Medical Society and the Blue Cross and Blue Shield, for further study and conference with Dr. Charles G. Hayden, medical director of the Blue Shield.

That section of the report of the Committee on Public Relations containing the report of the Subcommittee on the Formation of a Woman's Auxiliary was discussed, and Dr. John F. Conlin, Suffolk, director of medical information and education, reported the establishment of the State Advisory Council and progress in Suffolk and Norfolk, two of the five districts that have approved district auxiliaries.

The acceptance of the report as a whole is recommended by the Executive Committee.

Committee on Legislation

The Executive Committee recommends the acceptance of this report.

Committee on Arrangements

The Committee on Arrangements reports that the next annual meeting of the Society will take place May 25 to 27, inclusive, at the Hotel Statler in Boston.

The Executive Committee recommends the acceptance of this informational report.

Committee on Finance

The committee approved the recommendations made by the Treasurer, at the Council meeting on February 5, 1947, provisional on the raising of the annual assessment to $25.00, that,

1. The refund to district societies be increased from $4000 a year to $8000.
2. The total amount of the assets of the General Fund be set at $250,000 and the balance of income over expenditures be automatically turned over to the Building Fund.

The Executive Committee approves this report and recommends its adoption by the Council.

Committee on Cancer

The Committee on Cancer, in recommending approval of the request of the New England Deaconess Hospital for the establishment of a cancer-detection clinic, points out the opportunities that exist for funds for cancer research and cancer education, as shown in the committee's report.

The Executive Committee recommends that the question be referred to the Council without prejudice and that Dr. Shields Warren, chairman of the committee, be asked to present the report and discuss it.

Committee on Physical Medicine

The Executive Committee recommends the acceptance of this report and the adoption of its recommendation.

Committee to Meet with General Hawley

This report contains the agreement, according to the Kansas Plan, entered into by the Massachusetts Medical Society and the Veterans Administration and signed by the President and Secretary in accordance with the vote of the Council on May 19, 1947.

The Executive Committee recommends the acceptance of this report and the approval by the Council of a board of review to be nominated by the President according to Section 9 of the agreement.

The President at this point read a communication from the Council on Medical Service of the American Medical Association asking that representatives be sent to a conference on "Veterans Administration Home Town Medical Care Program" to be held at the Headquarters of the American Medical Association in Chicago on November 6, 1947.

The Executive Committee recommends that the President be authorized to nominate such representatives.

Committee to Study Malpractice Insurance in Massachusetts

President Bagg, in presenting this report to the Executive Committee, called particular attention to its excellence and to the tremendous amount of work that had gone into its compilation.

The Executive Committee recommends the acceptance of this report and the adoption of its first three recommendations. It further recommends that the fourth recommendation, asking for the discharge of the committee, be not adopted, but that the present committee, with proper replacements, be continued.

Committee on New England Postgraduate Assembly

The Executive Committee recommends the acceptance of this informational report.

Committee to Establish a Pension Plan

Dr. Eliot Hubbard, in discussing this excellent report, pointed out that there is only one employee of the Society of long enough standing to be considered as a candidate for a policy under such a plan. Since the average salary of this employee over the years he has been with the Society has been much less than his present salary, it seems fairer that a policy taken out for him should be based on his salary at the time the policy is dated.

The Executive Committee recommends that this matter be referred back to the committee for further study.

Advisory Committee on School Medical Services

This report was the subject of considerable discussion in the Executive Committee, particularly regarding the recommendation that the present law requiring annual examination of school children be amended to provide for less frequent but more adequate examination. Discussion of this recommendation brought out the observation that no member of the committee had anything to do with school services and that it might be preferable to augment the committee or refer the matter to a group of school physicians for further consideration. Further discussion hinged about the controversial point as to whether school health should be under the department of education or that of health. This was not settled.

Debate over the desirability of the Society's drawing up a bill and arranging its introduction to the legislature was lengthy and varied. The Executive Committee finally agreed to recommend that it would be better for the Society to approve a bill introduced by some other agency, than to initiate one itself.

The Executive Committee hesitates to give an opinion on the thirteen recommendations of the Committee on Public Health that were referred to the Committee on School Medical Services. It does recommend the adoption by the Council of Recommendation 2, asking that a representative be sent to a conference on school health sponsored by the American Medical Association.

The remainder of the report is recommended for acceptance as one of progress, to be referred back to the committee for further study.

The Executive Committee recommends the acceptance of the excellent report of the Massachusetts representatives to the meeting of the House of Delegates of the American Medical Association at Atlantic City on June 9, 10, 11, 12, 1947.

Other Business

A letter was read from the Secretary requesting consideration of the matter of patients who wish to have physicians referred to them by the Secretary's office. The Executive Committee recommends that this problem be referred to the Committee on Public Relations.

A letter from Dr. O'Hara was read stressing the urgency of making the Secretaryship a full-time position. The Executive Committee recommends that this matter and the relations between the Secretary, the Director of Medical Information and the Executive Secretary be referred to a committee of seven, to report at an early meeting of the Council for action.

A communication was read from Mr. James A. Morrison, manager of the Convention Bureau of the Boston Chamber of Commerce, addressed to Mr. Boyd, the executive secretary.

This letter called attention to the new policy of the American Medical Association House of Delegates of having mid-year meetings away from Chicago. It was suggested that if the Massachusetts Medical Society cared to extend an invitation to the House of Delegates to hold its mid-year meeting and convention in Boston in the not too distant future, the Boston Chamber of Commerce would be glad to co-operate.

This matter was referred to the Secretary, to ascertain the opinions of the Massachusetts delegates and to act accordingly.

Dr. John F. Conlin, director of medical information and education, introduced the subject of the activities of the National Physicians Committee and the attitude that the Society should take toward them.

Dr. Conlin gave the information that the National Physicians Committee is the third most powerful lobby in Washington, having expended about $600,000 in the last year, mostly for lobbying. Although its objectives are approved by the House of Delegates of the American Medical Association, its methods have aroused considerable criticism. Na-

tional legislators and others are justly confused as to who represents the medical profession of the country.

The Executive Committee makes no recommendation for action by the Council.

A letter was read from Dr. George F. H. Bowers and other relatives of the late Dr. Walter P. Bowers, expressing appreciation for the floral tribute sent to the funeral services.

The Secretary asked for instruction concerning the use of the Society's addressograph by district societies and others and was given authority to handle this matter with Mr. Boyd, as office business.

The meeting was adjourned at 6:30 p.m.

JOSEPH GARLAND, *Secretary*

APPENDIX NO. 3

REPORT OF COMMITTEE ON PUBLIC RELATIONS

At the last meeting of the Public Relations Committee, June 25, 1947, President Bagg expressed for the members of the Committee their sincere appreciation of the excellent work that Dr. Albert A. Hornor had performed as Secretary of the Committee on Public Relations. Dr. Harold R. Kurth, Essex North, was then elected as the new Secretary for this Committee.

President Bagg further reported that he had appointed as representatives to serve with Dr. Norman Welch on the Council of the New England state medical societies, Dr. Archibald J. Douglas, Hampden, and Dr. Gerald N. Hoeffel, Middlesex South.

Dr. Charles D. McCann, Plymouth, reported for the subcommittee that was appointed at the last meeting to investigate the relation between members of the Massachusetts Medical Society to the Blue Cross and Blue Shield as follows:

At the March meeting of the Public Relations Committee Dr. Harold R. Kurth, Essex North, offered a resolution in regard to the arrangement in the Blue Cross setup, wherein the anesthestists are reimbursed only when they are on salary in a hospital.

The question then came up about professional and hospital service in general. After a good deal of discussion the undersigned committee was appointed by Dr. Dwight O'Hara to study any problem that might exist between members of the Massachusetts Medical Society and the Blue Cross and Blue Shield.

In order to obtain information in this respect the committee sent out a letter to the members of the Committee on Public Relations acking them to gather information concerning this problem and to bring that information to the next meeting of the committee.

On May 13, 1947, this subcommittee met at the Harvard Club with representatives of the Anesthesiological Society, the Roentgenological Society, and the Pathological Society. Drs. Eversole and Wiggin, Drs. Sosman, Altman and Mueller, and Drs. Castleman and Nickerson represented the above-named societies.

These representatives were in accord that the setup in regard to professional and hospital service was very much mixed up, and it was their belief that services rendered by those groups should be taken care of under the Blue Shield program rather than by the Blue Cross.

At the annual Council meeting of the Massachusetts Medical Society, Dr. Sosman offered a resolution to this effect, and it was voted by the Council that the President appoint a general committee from the Society to study the whole Blue Cross and Blue Shield Plan.

In view of this decision this committee hopes that this report will be accepted and the committee discharged.

ALBERT A. HORNOR, M.D.
HAROLD R. KURTH, M.D.
CHARLES D. MCCANN, M.D.

As a result of the request by the subcommittee that the members of the Committee on Public Relations gather what information they could concerning this problem, to be presented at this meeting of the committee, there ensued considerable discussion with reference to the relation of the members of the Blue Cross and Blue Shield.

Dr. Henry A. Robinson, Norfolk South, brought forth the criticism that in the lists of participating physicians of the Blue Shield there was no way of distinguishing between regular physicians and osteopathic physicians. It was felt that this might lead to unnecessary confusion unless proper distinction be made. No action was taken by the Committee on Public Relations with reference to this criticism.

Dr. B. Appel, Essex South, stated that his district had requested him to present a resolution, which was unanimously accepted by Essex South, that medical service should not be considered under Blue Cross. He stated that the staff of the Lynn Hospital had also recorded itself as unanimously opposed to medical service being considered under Blue Cross. No action was taken by the Committee on Public Relations with reference to this resolution as it was felt that this matter at the present time was being discussed by the new Committee on Special Services.

Dr. H. M. Kemp, Franklin, stated that very little attempt was being made by Blue Shield to determine accurately an applicant's yearly income. This is necessary in determining whether an applicant is entitled to a limited or unlimited type of policy. At the present time the applicant's statement of income is accepted as correct. Attention was called to the fact that often a physician was entitled to make extra charges, fully aware that his patient's income was above the accepted $3000, but found that he could not do so because the patient had been issued an unlimited policy, whereas, in reality, he should have been issued a limited policy thereby allowing the attending physician to make an extra charge. Such a situation often leads to some confusion in the patient-physician relation.

Dr. N. S. Scarcello, Worcester, offered the following resolution: "That the Blue Shield through its employees determine accurately an applicant's yearly earnings before issuing the policy, and secondly, that these earnings be reviewed each year."

This resolution was adopted by the Committee on Public Relations.

There also followed some general discussion, more or less informative in nature, namely, that Blue Shield allowed a larger fee schedule for obstetric care to the specialist than to the general practitioner doing the same type of work. It was the opinion of the Committee on Public Relations as a whole that at some future time there might be some more favorable revision of the fee schedule of the Blue Shield.

Following this presentation by the various members of the Committee on Public Relations, Dr. McCann moved for the acceptance of the report of this special subcommittee for the Blue Cross and Blue Shield problem. The report was accepted, but the recommendation that this committee be discharged was rejected. It was believed that this subcommittee should continue to function to consider such additional information as may in the future be brought to its attention with reference to Blue Shield and Blue Cross problems, and to report its findings to the Committee on Public Relations.

Dr. Milton Quinn, Middlesex East, reported for the Committee on the Formation of a Women's Auxiliary, stating that the Council had endorsed such a program for establishing such auxiliaries in the districts that so desired it. The Committee on Public Relations felt that the organization of these auxiliaries should be turned over to Dr. John F. Conlin, director of medical information and education.

Dr. Harold R. Kurth, Essex North, reported for the Committee appointed by Dr. Dwight O'Hara to draw up resolutions expressing the sympathy of the Committee on Public Relations to the family of the late committee member, Dr. Daniel J. Ellison of Middlesex North. A letter to this effect was sent to his daughter, Mrs. Malcolm Stevens, Lowell, Massachusetts.

Dr. John F. Conlin stated that he would assume his new office as director of medical information and education on July 1, 1947. He urged the various members present to call upon him for whatever service he might give them in matters of public relations.

HAROLD R. KURTH, *Secretary*

APPENDIX NO. 4

REPORT OF THE COMMITTEE TO MEET WITH GENERAL HAWLEY

The committee, since reporting to the Council on May 19, has been successful in securing a contract with the Veterans

Administration providing for examination, treatment and counseling of eligible veterans in Massachusetts. The contract, which follows, was signed for the Massachusetts Medical Society by the President and Secretary on July 23, 1947, was received and approved by the Chief Medical Director of the Veterans Administration, General Paul R. Hawley, on the following day, and has been forwarded to the Director of Supply for appropriate action.

July 1, 1947

To the Administrator of Veterans Affairs:

The Massachusetts Medical Society and the Veterans Administration for the purpose of establishing and maintaining a close working relation in order to establish a well-integrated service for providing medical care and treatment for veterans of the State of Massachusetts beyond those services available to the Veterans Administration in existing Veterans Administration facilities and installations, do hereby mutually agree as follows:

(1) The Massachusetts Medical Society will request all its members to participate in a State-wide program whereby physicians in private practice in the State of Massachusetts will render medical services (examinations, treatments and counsel) in such cases as may be specifically authorized by the Veterans Administration.

(2) The Massachusetts Medical Society will submit to the Veterans Administration a list of its members who desire to provide service for eligible veterans in the home communities of such veterans. This list may be augmented from time to time as additional physicians may indicate a desire to participate in the program. The physicians so listed will be fee basis physicians of the Veterans Administration. By notice in writing a physician may at any time request that his name be removed from the list of fee basis physicians.

(3) The Massachusetts Medical Society will assist the Veterans Administration in establishing, for examinations and treatment, a list of competent specialists who meet the qualifications of specialist of the Veterans Administration.

(4) Lists of physicians submitted by the Massachusetts Medical Society will be broken down by counties or districts in order that the veterans for whom services are authorized may select a physician practicing in his home community. The choice of the physician by the veteran, provided for herein, is not applicable to examinations for pension or compensation rating purposes. Such examinations may be performed only by a physician specifically designated for that purpose by the Veterans Administration.

(5) Fees for medical services in authorized cases shall be paid by the Veterans Administration to the physician rendering the service in accordance with the Fee Schedule hereto attached, which is made a part of this agreement. The Massachusetts Medical Society warrants that the rates set forth herein are not in excess of the rate of fees charged other persons who are not Veterans Administration beneficiaries for the same or comparable services. It is mutually understood that the fees stated in the Fee Schedule represent the maximum amount that may be charged, and do not represent the amount to be paid in every case. The Veterans Administration will advise each physician of this provision, and will require each physician to certify in submitting his statement of account that the fees charged are not in excess of the fees charged by him for comparable service rendered non-veterans. It is understood that unusually involved cases and services not scheduled will be subject to review and recommendation by the Massachusetts Medical Society to the Veterans Administration for determination of the appropriate fee.

(6) The Veterans Administration will handle administrative and clerical details in connection with the authorization of examinations or treatments and the maintenance of records; and will arrange for transportation of the veteran if necessary.

(7) When authorizing treatment, the Veterans Administration will furnish to the veteran, proof of such authorization and a list of fee basis physicians in the county or district in which the veteran is located, in order that he may select his own physician for the services authorized.

(8) The Veterans Administration will review reports of examinations and services to determine their adequacy. No fees will be paid by the Veterans Administration for reports that are not acceptable to the Veterans Administration or for services rendered in unauthorized cases.

(9) The Massachusetts Medical Society will establish one or more boards of review composed of physicians. It shall be the duty of such board to review reports, which are deemed by the Veterans Administration to be inadequate or which do not meet the requirements of the Veterans Administration; to recommend, at its discretion, the disqualification of any physician for further work with the Veterans Administration whose work is found by the board to be incomplete or unsatisfactory; to advise and assist the Veterans Administration on other matters within the scope of this program.

(10) It is agreed that services furnished under the agreement will be performed by licensed physicians. It is further agreed that physicians rendering services hereunder will be citizens of the United States who are doctors of medicine duly licensed to practice medicine and surgery in the State of Massachusetts.

(11) This agreement shall be effective from July 1, 1947, to July 1, 1948, and may be terminated by either party by giving thirty (30) days' written notice to that effect.

(12) This agreement, if mutually satisfactory, may be renewed indefinitely for a period of one (1) year each, upon notice in writing to the Veterans Administration at least sixty (60) days prior to the expiration of each period of one (1) year, and written statement from the Massachusetts Medical Society within thirty (30) days after such notification agreeing to the renewal.

(13) No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this agreement or to any benefit that may arise therefrom unless it be made with a corporation for its general benefit.

(14) The Massachusetts Medical Society agrees that in performing this agreement it will not discriminate against any employee or applicant for employment because of race, creed, color or national origin.

(15) The Massachusetts Medical Society does not propose to make any charge for any service rendered to the Veterans Administration under this agreement.

For your further information, you are advised that it has been found necessary to adopt a policy that no physician will be permitted to accept fee-basis cases for the Veterans Administration in excess of $6000 in any one year without the prior approval of this office. All Branch Medical Directors have been instructed to enforce this policy and to advise all participating physicians that it is in effect.

It will be further noted that in the paragraph which provides that physicians will be licensed, a provision has been added that they must be citizens of the United States. This is required by law. As you will see, no reference has been made in the proposed Agreement to the item "Notice to Bidders," as this provision does not apply to an Agreement of this type.

It is also understood from the Chief, Out-Patient Division of the Boston Branch Office that Massachusetts Medical Society has agreed to accept the new Veterans Administration Fee Schedule (Form 10–2535*a*), which is attached hereto and made a part of this Agreement.

Massachusetts Medical Society
By: Edward P. Bagg, *President*
Joseph Garland, *Secretary*

The new Fee Schedule (Form 10–2535*a*) will be sent by the Veterans Administration to all participating physicians.

The Committee recommends that under Section (9) a Board of Physicians be appointed by the President or Council to review questionable reports or inadequate treatment.

ALLEN S. JOHNSON
JAMES K. BRAGGER
HUMPHREY L. MCCARTHY, *Chairman*

APPENDIX NO. 5

REPORT OF COMMITTEE TO SURVEY MALPRACTICE INSURANCE IN MASSACHUSETTS

In our report to the Council on February 5, 1947, it was stated that letters had been sent to:

I. All fellows of the Massachusetts Medical Society together with a questionnaire.
II. Secretaries of all State Medical Societies in the United States.
III. Insurance companies underwriting most of the medical malpractice insurance in Massachusetts.

I

SUMMARY OF REPLIES TO QUESTIONNAIRE

Questionnaires mailed		5,530
Questionnaires returned		3,701 (67%)
Resident fellows	3,446 (93%)	
Nonresident fellows	255 (7%)	
	3,701	
A. Fellows with malpractice insurance		2,862 (77%)
Resident fellows	2,717 (74%)	
Nonresident fellows	145 (3%)	
	2,862	
Premiums paid:		*Average*
By 2,717 insured resident fellows	$85,917.04	$31.62
By 145 insured nonresident fellows	4,648.02	32.00
	$90,565.06	$31.64
Fellows paying less than $50.00	90%	
Fellows paying more than $50.00	10%	
Estimated total amount paid for premiums by total membership of 6,283 (as of January, 1947)		$153,074.32
(77% of 6,283 (4,838) × $31.64 = $153,074.32)		
Estimated total amount paid for premiums by the 5,694 resident fellows (as of January, 1947)		$145,831.44
(81% of 5,694 (4,612) × $31.62 = $145,831.44)		
B. Fellows without malpractice insurance		839 (23%)
Resident fellows (including 87 retired)	729 (19%)	
Nonresident fellows	110 (4%)	
	839	
Estimated number of resident fellows without malpractice insurance		1,082
(19% of 5,694 = 1,082)		

Comment: Dr. A. W. Allen, chairman of the Committee on Medical Defense wrote: "The annual cost of legal defense for the members not carrying insurance over a period of ten years would not be over $1,000" and the attorney for the Massachusetts Medical Society wrote that during the ten years prior to January 1, 1947, the Committee on Medical Defense handled:

Total number of cases	38	
Cases actually tried	7	
Judgment for defendant 7		
Judgment for plaintiff. None	P. *vs.* C.	$ 400.00
	R. *vs.* D.	2,000.00
Cases settled 4	P. *vs.* R. / P. *vs.* B.	$ 100.00
	B. *vs.* B.	$1,175.00
Cases disposed of without trial either by discontinuance or dismissal because of plaintiff's failure to prosecute	19	
Cases pending	8	

C. Type of practice of insured fellows

Medical	1,547 (42%)
Surgical	1,256 (34%)
X-ray exclusively	59 (1%)
X-ray plus other type practice	217

D. Companies doing most of the malpractice underwriting in Massachusetts

United States Fidelity and Guaranty Company	1,298 (35%)
Medical Protective Company	1,034 (28%)
Lumbermen's Mutual Casualty Company (including American Motorists)	170 (5%)
Hartford Accident and Indemnity Company	99 (3%)

There are approximately eighteen other companies each insuring less than 1%.

Comment: Council on Medical Service, A. M. A., reported (*J. A. M. A.*, May 10, 1947), that of 62 direct inquiries, only 21 companies indicated they were writing malpractice coverage; 33 replied negatively, one stated that plans were underway, and no replies were received from the other seven.

E. Suggestions volunteered

The Massachusetts Medical Society should have its own indemnity insurance	513 (14%)
The Massachusetts Medical Society should *not* have its own indemnity insurance	33(.9%)

Illustrative remarks in favor of Society having own insurance

(1) "I would very much like not to buy commercial insurance if I were assured that I could be fully protected by the Massachusetts Medical Society."

(2) "I have the impression our membership would be in a stronger position in case of individual suit if it was protected as a group — en masse — and by the Society rather than by many different companies all with different charges and varying degrees of responsibility."

(3) "I believe the proposal of self insurance by the Massachusetts Medical Society is an excellent one."

(4) "I am heartily in favor of a mutual co-operative malpractice insurance to be maintained and administered by the Massachusetts Medical Society. But — why not include health, accident, and retirement annuity?"

(5) "I think the Society could handle this subject far better than the insurance companies."

Illustrative remarks against Society having own insurance

(1) "I see no reason for a questionnaire of this sort, as I think the Society should stick to medicine and not to insurance."

(2) "I do not believe we should in any way be in the insurance business. I know of a physician who cannot afford malpractice insurance. How long have we got to carry stingy, selfish, lazy, bottle-fed members on our sturdy shoulders."

(3) "If any physician fails to carry malpractice insurance, then the Society should not defend him in case of a suit."

(4) "State medical society insurance is poor business and probably not allowed by our charter. The defendant doctor is exposed to the personality and criticism of his colleagues, some of whom the defendant may not approve. Further, the public may think the Society approved the defendant regardless of the action brought against him."

(5) "Let's stick to our business and let the insurance companies stick to insurance."

Other remarks

(1) "Returned to practice after three and a half years of service in the Army and have been unable to get coverage. I am a Middlesex graduate and I had coverage in the past but because I did not continue during my services in the Army, I am not able to get coverage. I never had a claim against me in over twenty years of practice."

(2) "Was under the impression that the Society recommended and endorsed that all members be insured with United States Fidelity and Guaranty Company."

Comment: This impression is probably due to the fact that the policy states, "Special Physicians' Liability Policy for members of the Massachusetts Medical Society."

II

Replies from Secretaries of State Medical Societies and Washington, D. C.

Letters mailed		49
Replies		44
States not replying: Vermont, Missouri, Maryland, Florida, Oregon.		
A. State societies with medical defense committee		28
Committees co-operating with both physician threatened and insurance company involved	24	
Committees advising *only* the physician threatened	4	
	28	
B. State societies defending members		18
State societies not defending members		26
C. State societies paying indemnity		0
D. Minimum rates charged by insurance companies in various states		
States not furnishing rates	17	
States furnishing rates	27	
	44	

Societies with Group Policy

State	*Coverage*	*Rate*
(1) Louisiana	$ 5,000/$15,000	$15.00
(2) New Mexico	5,000/ 15,000	22.50
(3) New York	5,000/ 15,000	28.00
(4) District of Columbia	5,000/ 15,000	30.00
(5) New Hampshire	5,000/ 15,000	30.00
(6) Tennessee	5,000/ 15,000	30.00
(7) Washington State	5,000/ 15,000	30.00
(8) Delaware	10,000/ 20,000	25.00
(9) Connecticut	10,000/ 25,000	12.50
(10) Oklahoma	10,000/ 30,000	26.00
(11) Arkansas	15,000/ 30,000	28.00
(12) Alabama	(usual limits–?)	22.50

Societies without Group Policy

State	*Coverage*	*Rate*
(1) Ohio	$ 2,500/$ 7,500	$17.00
(2) Massachusetts	2,500/ 7,500	17.00
(3) Kentucky	2,500/ 7,500	17.00
(4) Michigan	2,500/ 7,500	17.00
(5) Colorado	5,000/ 15,000	22.00
(6) Iowa	5,000/ 15,000	22.00
(7) Indiana	5,000/ 15,000	25.00
(8) Wisconsin	5,000/ 15,000	25.00
(9) Utah	5,000/ 15,000	35.00
(10) South Dakota	5,000/ 15,000	45.00
(11) California	5,000/ 15,000	60.00
(12) New Jersey	10,000/ 30,000	24.00
(13) West Virginia	10,000/ 30,000	25.00
(14) Nebraska	10,000/ 30,000	32.25
(15) Rhode Island	(usual limits–?)	20.00

Comments: Of the 27 states furnishing rates:

a. The highest rate is paid by California physicians who are individually insured; for $5,000/$15,000 coverage they pay $60.00 annually.

b. The lowest rate is enjoyed by Connecticut physicians who have a group policy; for $10,000/$25,000 coverage they pay $12.50.

c. In the seven states with group insurance, $5,000/$15,000 coverage, physicians pay from $15.00 to $30.00.

d. In the seven states with individual policies, $5,000/$15,000 coverage, physicians pay from $22.00 to $60.00.

e. In one state physicians with individual policies pay less than physicians in another state covered by group insurance. In New Jersey physicians have individual policies and for $10,000/$30,000 coverage pay $24.00. In Oklahoma under a group policy for the same coverage physicians pay $26.00 but before the adoption of the group policy, individual physicians paid $70.00.

f. In New Hampshire following the adoption of group policy about seven years ago there have been at least four successive reductions in rates. For a surgeon with $5,000/$15,000 coverage the rate has been reduced from $50.00 to $35.00. The medical society also established a medical defense committee with which the insurance company co-operates and which serves in an advisory capacity to the physician against whom a claim has been made and to the insurance company. Both the insurance company and the medical society believe that the establishment of the committee has been very helpful in decreasing the number of claims and the cost of premiums.

E. Liability insurance company organized by physicians.

In only one state have physicians organized their own mutual liability insurance company. In 1944, physicians in the State of Washington organized the Washington Physician's Service Corporation. This company is licensed to underwrite malpractice liability insurance if and when it is deemed necessary or desirable. Its capital stock is $150,000.00 and reserves are $100,000.00. It is owned by the physicians of that State but is not, as yet, functioning. The state medical society still has a group policy.

Comment: The Council of the Massachusetts Medical Society in 1921 discussed the advisability of developing a mutual insurance company for physicians in Massachusetts. A plan was outlined whereby the members could form a company, pay in assessments, have the money deposited in a bank or invested in any way which an executive committee might see fit, and in that way provide for the administration of this type of business. When the question was raised as to whether the state medical society could legally engage in this kind of business, Mr. E. P. Saltonstall, at that time attorney for the Massachusetts Medical Society, stated:

"Your articles of incorporation contain nothing which would seem to warrant your undertaking to pay verdicts or settlements in malpractice suits against its members and I should therefore assume that if you were going to undertake this work you would have to obtain an amendment to your charter."

That year (1921) the Massachusetts Medical Society recommended to its members that they take advantage of a group policy submitted by the United States Fidelity and Guaranty Company. However, in 1923, the Attorney General (Jay K. Benton) rendered an opinion that a group or blanket policy of liability insurance could not be issued to an association of dentists or physicians if the rates were discriminatory. This opinion was written but not printed and has not been nullified. The opinion was rendered because of complaints from the public that a cheaper rate was being given to physicians. We were told by an assistant attorney general that there was nothing in the law to prevent medical societies from writing their own liability insurance. Should the Massachusetts Medical Society undertake to do this, the assistant attorney general estimated that a surplus of about $300,000.00 would be needed.

III

Replies from Insurance Companies

Most of the insurance companies to whom we wrote were co-operative. The Medical Protective Company, however, did not reply to either of our two letters.

A. Eligibility Requirements

(1) One company stated it was a strict requirement of their company that every doctor they insure be a member of the American Medical Association or any of its state or county associations.

(2) One company stated that they did not accept all applicants. They may refuse to insure a graduate of an approved medical school and may accept a member who is a graduate of an unapproved medical school. However, they consider graduates of unapproved schools to be a much greater risk than those of approved schools. All applicants are investigated.

(3) Three companies stated that they accept graduates of unapproved medical schools; two stated that as a rule they did not. No company stated that they would not accept a graduate of an unapproved school.

Comment: Some physicians, however, remarked on their questionnaires that they were unable to obtain malpractice insurance because they graduated from an unapproved medical school.

B. Co-operation with Committee of Society

All companies replying stated that they would co-operate with a committee of the Society. One company wrote, "We wholeheartedly welcome the opportunity of being able to co-operate with such a committee." The same company also stated that such a procedure would undoubtedly be an important factor in further reducing the cost of this protection to the members of the Society through the medium of favorable experience.

Another company suggested that if a member of a malpractice committee was in court and listened to every malpractice action in which adverse medical opinion evidence was to be given, and made a complaint against any testimony that was untrue, that it would discourage such testimony. The company stated:

"The mere knowledge that such a committee would sit in at all malpractice trials would deter and discourage all physicians from giving testimony of dishonest nature, and this deterrent effect would be even greater if the State Board of Registration did the same thing. The weak, incompetent, and the mentally dishonest would hesitate more than they do now to risk their license for a prospective expert fee."

C. Rates in Massachusetts

(1) United States Fidelity and Guaranty Company:
$10,000/$30,000 = $19.00–$70.00
(depending on type of practice).

(2) Hartford Accident and Indemnity Company:
$10,000/$30,000 = $25.00–$74.00
(depending on type of practice).

(3) American Motorists Insurance Company:
$5,000/$15,000 = $25.00–$40.00
(depending on type of practice).

(4) American Policyholders' Insurance Company:
$10,000/$30,000 = $20.00 (same rate for both practitioners and surgeons) and after 1st year, less 15% dividend or $17.00 a year.

(5) Medical Protective Company:
$2,500/$7,500 = $17.00–$23.00
(rates obtained from printed literature).

Comments: (1) Since the survey of malpractice insurance in Massachusetts has been in progress, two companies have reduced their premiums.

(*a*) The United States Fidelity and Guaranty Company reduced their rates 5 per cent for all specialties except x-ray.

(*b*) The Medical Protective Company reduced their premiums from $2.00 to $3.00 on a policy.

$2,500/$ 7,500 limits (restricted) from $19.00 to $17.00
$2,500/$ 7,500 limits (unrestricted) from $25.00 to $23.00
$5,000/$15,000 limits (restricted) from $22.00 to $19.00
$5,000/$15,000 limits (unrestricted) from $30.00 to $28.00

(2) Of the various companies investigated, the American Policyholders' Insurance Company, a subsidiary of the American Mutual Liability Insurance Company, offered the most attractive rates. Their policy is comparable to those of the other companies. Also,

(*a*) They will insure all members of the Massachusetts Medical Society. They consider membership in the Society a sufficient recommendation.

(*b*) Their basic rate applies to all physicians — both general practitioners and specialists; only those giving x-ray treatment and doing cosmetic plastic surgery have to pay a higher rate.

(*c*) They will co-operate 100 per cent with a committee of the Society.

(*d*) They will use the attorneys recommended by the Society.

IV

Additional Data

Incidence of Malpractice Suits

Hubert Winston Smith of Boston in a series of articles entitled "Legal Responsibility for Medical Malpractice" which appeared in the *J. A. M. A.* during 1941 stated: "Much is heard and said about the peril of malpractice claims but there is a definite lack of accurate information by which one might appraise the reality and size of this hazard." In an effort to obtain some factual data Smith collected and tabulated all the civil malpractice appeal cases decided by American courts from 1794 to January 1, 1940. In the following table is presented the appeal cases from 1930 to 1940.

Incidence of Appeal Cases of Civil Malpractice

According to Population and Number of Physicians

	Total Cases (1930 to 1940)		Cases per Million Population (1930 to 1940)		Cases per Physician (1930 to 1940)	
State or Jurisdiction	No.	Rating	No.	Rating	No.	Rating
Alabama	10	20	3.454	30	0.0046	16
Arizona	2	31	4.854	21	0.0038	22
Arkansas	3	37	1.464	42	0.0015	38
California	60	1	9.749	7	0.0055	12
Colorado	8	23	7.469	9	0.0041	19
Connecticut	12	15	6.892	11	0.0049	15
Delaware	1	46	3.601	28	0.0031	30
District of Columbia	7	27	11.164	6	0.0035	24
Florida	5	32	2.994	33	0.0025	32
Georgia	18	6	5.834	14	0.0065	9
Idaho	6	30	12.178	3	0.014	2
Illinois	15	12	1.904	39	0.0012	41
Indiana	7	27	2.014	38	0.0017	37
Iowa	8	23	3.134	32	0.0025	32
Kansas	5	32	2.682	35	0.0022	35
Kentucky	13	13	4.442	23	0.0046	16
Louisiana	9	22	4.221	24	0.0042	18
Maine	5	32	5.817	15	0.0052	13
Maryland	3	37	1.786	40	0.0010	43
Massachusetts	18	6	4.067	25	0.0024	34
Michigan	22	3	4.575	22	0.0037	23
Minnesota	17	10	6.428	12	0.0051	14
Mississippi	2	41	0.992	46	0.0013	39
Missouri	20	5	5.031	20	0.0032	28
Montana	3	37	5.565	16	0.0062	11
Nebraska	7	27	5.128	19	0.0039	20
Nevada	0	49	0.000	48	0.0000	48
New Hampshire	2	41	3.929	26	0.0033	26
New Jersey	11	17	2.536	36	0.0021	36
New Mexico	0	49	0.000	48	0.0000	48

State or Jurisdiction	Total Cases (1930 to 1940) No.	Rating	Cases per Million Population (1930 to 1940) No.	Rating	Cases per Physician (1930 to 1940) No.	Rating
New York	32	2	2.471	37	0.0013	39
North Carolina ..	18	6	5.172	18	0.0070	8
North Dakota ..	8	23	11.347	5	0.015	1
Ohio	11	17	1.619	41	0.0012	41
Oklahoma	16	11	6.301	13	0.0065	9
Oregon	12	15	11.741	4	0.0089	5
Pennsylvania....	13	13	1.278	44	0.0010	43
Rhode Island ...	1	46	1.453	43	0.0010	43
South Carolina ..	1	46	0.537	47	0.0007	47
South Dakota ..	5	32	7.225	10	0.0088	6
Tennessee	10	20	3.473	29	0.0034	25
Texas	18	6	2.916	34	0.0026	31
Utah	8	23	15.414	1	0.014	2
Vermont.....	3	37	5.221	17	0.0039	20
Virginia	2	41	1.108	45	0.0010	43
Washington	21	4	12.665	2	0.010	4
West Virginia ...	6	30	3.217	31	0.0033	26
Wisconsin	11	17	3.759	27	0.0032	28
Wyoming	2	41	8.510	8	0.0076	7

Comment: The cases decided by the appellate courts obviously represent only a fraction of the complaints of negligent practice. The appeal cases are those which usually involve a substantial "stake" — judgments ranging from $1000 to $50,000.

Massachusetts with eighteen appeal cases between 1930 and 1940, was rated sixth; in other words, only five states had more such cases. On the other hand, in so far as cases per million population are concerned (4.067), Massachusetts was 25 and with 0.0024 cases per physician, Massachusetts was rated 34 — only fifteen states had less cases per physician.

Conclusions

(1) More information on the subject of malpractice insurance should be accumulated.

(2) After sufficient data have been collected, the advisability of adopting a group-type of insurance should be considered.

Recommendations

(1) That the Massachusetts Medical Society should not undertake its own liability insurance at this time.

(2) That no one company be recommended exclusively at this time.

(3) That a special committee of five fellows be appointed by the President to act in an advisory capacity to the Society and insurance companies in regard to malpractice insurance.

(4) That the present committee be discharged.

Carl Bearse, *Chairman*
William J. Brickley
Edwin D. Gardner
Daniel B. Reardon
Guy L. Richardson

APPENDIX NO. 6

Report of the Committee to Establish a Pension Plan

The problem before the committee was to arrive at some principles to be followed in establishing a pension plan for the employees of the Massachusetts Medical Society. Dr. Robert N. Nye, managing editor of the *New England Journal of Medicine*, was made a member of the committee in order to facilitate the adoption of any plan that might include employees of both the Massachusetts Medical Society and the *New England Journal of Medicine*.

There are now nineteen employees, seven of whom work for the Massachusetts Medical Society and twelve who are employed by the *Journal*.

The following points had to be considered:

Who is to be included?
What amount is to be paid at retirement?
When shall the benefits be payable? (An employee will do only one of three things: retire, die or resign. If the benefits accruing under these occurrences are determined, each activity of the employee is covered.)
Shall the employee contribute?

Who Is To Be Included?

Probationary period. It is essential that a probationary period be established before eligibility. Should this be one, two, three or five years? We recommend five years.

Participating age. Little interest in a plan to benefit them at age sixty-five can be expected from young girls. Most of them do not expect to stay, and generally any money spent for them is wasted. What age for participation of employees shall be established? Should this be twenty-five, thirty or thirty-five? We recommend age thirty-five for women and thirty for men.

Minimum years of service. It seems reasonable that if an employee is first employed by the Society late in life, the Society does not have an obligation to provide a pension for that employee. Another way to express this thought is: What is the minimum number of years of service that should determine whether an employee is entitled to a pension — should this be ten, fifteen, twenty or twenty-five years? We recommend twenty years.

What Amount of Retirement Income Is To Be Paid?

Many plans give a pension credit for each year of service, generally 1 per cent or a fraction thereof for each year of service to date (past service) and 1 per cent for each year of future service. If the employee has many years of service, this provides a good pension, but this would not produce a pension commensurate with earnings for our top-salaried people. For example:

A female employee, age fifty-five, employed twenty-seven years, now earning $4500 yearly, would be asked to retire on $140 monthly, the equivalent of $30 weekly, after thirty-seven years of service.

A female employee, age fifty-two, employed twenty years, now earning $2500 yearly, would be asked to retire on about $70 monthly, the equivalent of $15 weekly, after thirty-five years of service.

A male employee, age fifty-five, employed ten years, now earning $10,000 yearly, would be asked to retire on about $170 monthly, the equivalent of less than $40 weekly, after twenty years of service.

A male employee, age fifty-seven, employed twelve years, now earning $4800 yearly, would be asked to retire on about $88 monthly, the equivalent of less than $20 weekly after twenty years of service.

We recommend that a pension of 50 per cent of the salary at the time the insurance is written be provided as a goal. If the recipient is granted increase in wages between the time he becomes eligible and the time he reaches the retirement age, proportionate increases in benefits would be added to the terms of the policy, but, in no case, irrespective of the wage at the time the policy is written, is the final monthly pension payment to be more than $200.

When Shall the Pension Benefits Be Paid?

Retirement age. Shall retirement be at fifty-five, sixty or sixty-five? The longer the period of funding, the smaller annual amount is required; also, the amount needed to buy a pension for an employee age sixty-five is less than for a pension at age sixty. Our recommendation is age sixty-five.

Death. Certainly the Society does not want to profit by the death of an employee; accordingly we recommend that whatever death benefit is available under the annuity contract be paid over to the beneficiary of the employee.

Disability or early retirement. If the employee withdraws within five years of membership (ten years of service), he receives no part of the annuity; if he leaves after five years of membership, he is entitled to 25 per cent of the annuity already purchased; the balance goes to the Society. The amount he receives increases thereafter. He may receive this either in the form of cash (the proper percentage of the cash value of the annuity) or in the form of an annuity (that percentage purchased at the time of disability or early retirement) to be paid by the insurance company when he reaches retirement age (sixty-five).

Shall the Employee Contribute?

This is a matter of personal opinion. The persons to be covered under our recommendations would appear to be able to make some contribution, but it is our recommendation that such an amount as they may elect to contribute should be used for the purchase of increased annuity rather than to decrease the amount paid by the Society for the basic annuity.

Summary of Recommendations

Eligibility. Those employees, age thirty if male and thirty-five if female, who have been in our employ five years or more and who at retirement will have had twenty years' service.

Retirement pension. Fifty per cent salary at the time the insurance is written.

Death benefits. Full amount, as provided by the insurance company.

Termination-of-service benefits. Prior to first five years, none; five to nine years, 25 per cent; ten to fourteen years, 50 per cent; and fifteen years or more, 100 per cent.

With the above recommendations in mind it is found on looking over the seven employees of the Massachusetts Medical Society that only one, a man aged fifty-seven years, is eligible. The others are either under participation age or have not been in our employ for a sufficient period of time. This being the case the simplest solution would seem to be to make no attempt to establish a program of group insurance and retirement.

Your committee recommends that an individual contract be made for this employee in the cost of which he may participate to whatever extent he wishes and that the selection of the company be made on the basis of both his wishes and those of the Treasurer of the Society. We have data from several companies concerning the cost of this type of retirement plan. It is suggested that this method might well be followed in each individual case as the person becomes eligible for insurance and a pension. It is further suggested that the individual arrangement be made by the Treasurer of the Society.

As an illustration of the probable cost of a typical retirement policy the annual rates of four companies on the basis of $100 of pension are as follows:

Age 35	$ 411.20 to	500.60
Age 45	679.10 to	817.00
Age 55	1,488.00 to	1,746.40

In view of the above data the committee recommends that no fund be established at the present time for the purpose of providing insurance and pensions for employees, but that individual arrangements be made as the occasion arises.

ROBERT W. BUCK, *Chairman*
ELIOT HUBBARD, JR.
ROBERT N. NYE
GEORGE W. PAPEN

APPENDIX NO. 7

REPORT OF THE ADVISORY COMMITTEE ON SCHOOL MEDICAL SERVICES

The Committee on School Medical Services appointed by the Council on February 5, 1947, to "establish an effective liaison between representatives of the Massachusetts Medical Society and health and education officials on both state and local levels" submits the following informational report together with certain recommendations.

For the information of the Council: —

(1) On May 28, 1947, your committee met with Mr. Arthur Pierce, superintendent of schools of Wellesley, appointed by the Massachusetts School Superintendents' Association to be the liaison person between the Superintendents' organization and your committee.

(2) Your committee submits for your information the copy of a letter being sent to all district society secretaries requesting the submission of physicians' names to be appointed to the district committees on school medical services.

(3) The Council referred to this committee the following recommendation of the Committee on Public Health: "That the Massachusetts Medical Society approve suggested legislation providing for full-time qualified medical health officers whenever possible and that school medical service be under their direction. The remuneration for full-time medical health officers should be sufficient to attract qualified personnel." A consideration of this recommendation led to so much discussion that it was decided to table this for the present, to allow for further information and discussion.

(4) The Council referred the following recommendation to the committee. "Examination by a private physician be acceptable to the school medical authorities if the examination is recorded on the school health form." Your committee changed this to read, "Examination by a licensed private physician be acceptable to the school medical authorities if the examination is recorded on the school health record form." This point was referred to the Commissioner of Public Health and Dr. Getting replied that he did not think this should be made the subject of a formal opinion by the Attorney General's Office on this point of law. It was Dr. Getting's opinion to which the Assistant Attorney General, Roger Clapp, concurred, that "it would be entirely within the province of a school department to accept a medical examination by a licensed physician."

(5) The Council referred the following recommendation to the attention of this committee: — "That teacher training be provided in teachers' colleges in growth and development of children; in teacher observation of the health of children; and in health education." This recommendation led to a great deal of discussion and the matter was tabled with the suggestion that a subcommittee of this committee and educators be appointed to make a further study and submit recommendations concerning teacher training in the field of health.

(6) The Council referred the following recommendation to this committee: — "The State Dental Society be encouraged to participate in the school health program to a greater extent." Your committee changed this to read, "The committee would pursue the co-operation between the medical and dental societies in the school health program."

Your committee accepts the following three recommendations unchanged.

(7) "That qualified district and community nutritionists provide for nutrition phases of local school health programs including school lunch programs."

(8) "That there be provided adequate physical, mental and psychological examinations of entering school children early enough so that there may be correction of remediable defects and completion of immunizations before the child enters school."

(9) "That the presence of parents be urged at the examination of younger children so that parental understanding of health needs may be insured."

(10) Your committee changed the following recommendation: — "That the interpretation be provided by the school physician and nurse of health findings to older children so that they may be motivated to do what is in their power to improve their health" to read, "The interpretation to be provided by the school physician and the nurse, acting under his supervision, of health findings to older children so that they might be motivated to do what is in their power to improve their health."

(11) Your committee changed the following recommendation: — "That there be provided interpretation by the school physician and nurse of health findings to teachers so that they may understand the health status of children under their daily observation, may make suitable provisions in classrooms and may assist the school nurse in emphasizing conditions to

parents" to read "To be provided by the school physician and the nurse under the guidance of the school physician, the interpretation of health findings to teachers so that they may understand the health status of children under their daily observation, may make suitable provisions in classrooms and may assist the school nurse in emphasizing conditions to parents."

(12) Your committee changed the following recommendation: — "That there be co-operation with the physical education program" to read, "The physical education program is an integral part of the over-all health program and should be worked out co-operatively with the school health authorities."

(13) Your committee changed the following recommendation: — "That continuing staff education for health personnel be provided under suitable auspices" to read, "continuing staff education for public health personnel should be encouraged."

RECOMMENDATIONS

(1) Your committee recommends that the present law requiring annual examinations be amended to provide for less frequent, but more adequate examinations on a spaced and selective system at least four times during the child's normal school life.

(Your committee suggests that the Executive Committee arrange with the Legislative Committee and Dr. Conlin and others authorized to draw up such a bill and present it to the Council at its October meeting. Mr. Pierce offered to secure approval of the Massachusetts Superintendents' Association through Mr. Burr Merriam and of the Massachusetts Teachers Federation through Mr. Hugh Nixon. He suggested that the Massachusetts Women's League and the League of Women Voters be asked to support the bill.)

(The opinion of the Commissioner of Public Health was sought to see if an "adequate" examination included the disrobing of children. Dr. Getting's opinion in which the Assistant Attorney General, Roger Clapp, concurred was "that the disrobing of children is necessary if an adequate physical examination is to be made.")

(2) The American Medical Association is sponsoring a conference on the Co-operation of the Physician in the School Health and Physical Education Program, October 16–18, 1947, under the auspices of its Bureau on Health Education. The conference will be held at the Hotel Moraine, Highland Park, Illinois. Invitations to send representatives will be extended to state medical societies (one representative from each state), state departments of education, health, teacher education and education administration (one from each state).

Dr. O'Hara referred the invitation to the Committee on School Medical Services with the notation that in his opinion the Massachusetts Medical Society should be represented and that this committee should ask for an extraordinary appropriation at the October meeting to cover the expenses of such representation.

Your committee considered the invitation and agreed that the Massachusetts Medical Society should be represented by a member of the Committee on School Medical Services and that either the chairman or Dr. Morris might be able to attend.

Your committee, therefore, recommends that the Council approve such representation and grant an extraordinary appropriation to cover the expenses of the trip.

STEWART H. CLIFFORD, *Chairman*
ELMER S. BAGNALL
JOSEPH GARLAND
FLORENCE MCKAY
ERNEST MORRIS
THOMAS F. REILLY
JAMES O. WAILS

APPENDIX NO. 8

REPORT OF THE MASSACHUSETTS REPRESENTATIVES TO THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 9, 10, 11 AND 12, 1947

The meeting of the House of Delegates opened promptly at 10 a.m., June 9, 1947. Out of a total of 175 delegates available, 173 delegates indicated their presence — an excellent showing. Five of your delegates were present: David D. Scannell, Leland S. McKittrick, Charles J. Kickham, Allen G. Rice (alternate for Charles E. Mongan) and John I. B. Vail (alternate for Walter G. Phippen). The first business of the meeting was the balloting for the recipient of the Distinguished Service Award. Two surviving out of three names were those of Dr. Henry A. Christian and Dr. Isaac A. Abt of Chicago. The Christian vote was 100; Abt's, 73. Although notified at once of his selection, Dr. Christian was unable to be present the following evening to receive the award in person.

There followed the usual addresses of the Speaker, the President and the President-Elect. All these addresses were of a very high quality and deserve to be read as they appear in the *Journal of the American Medical Association*, June 21 and later. We wish to call attention to the addresses of President Bortz on the morning of the first day and on the evening of the second day when he was inducted into office. They were unusually thoughtful and timely.

Following this, came the reports of the officers, many of them by title, since the delegates had read them in the handbooks issued several weeks before the meeting. Excellent addresses followed by Major-General Raymond D. Bliss, Surgeon-General of the United States Army (successor to General Kirk) and Rear-Admiral Clifford A. Swanson (successor to Admiral Ross McIntyre).

Assignments were then made to the various committees, which on this occasion concerned our group very little. We wish here to repeat what we have stated on many previous occasions: membership on these reference committees is the hardest kind of work — under pressure and under debate. This time it was harder than ever because of the multiplicity of measures introduced, requiring an unusual amount of deliberation. One thing that slowed up the meeting of the House was the introduction of foreign visitors and the reading of congratulatory messages from all over the world. There were present more than fifty visitors from foreign countries and at least twenty-five or thirty were presented during the first two days, some merely taking a bow, but many choosing to pay verbal compliments on the centennial of the Association. One speaker appearing on this first day was Admiral Boone whom we heard in San Francisco in July, 1946, on the same subject; viz., "Health Conditions in the Soft Coal Industry." He is an admirable speaker, clear-headed, convincing and brief. This time, as last, he made a very strong impression. The Government is most fortunate in having such a man in its service. His address should be read (Page 714 in the *Journal of the American Medical Association*, June 21).

One of the most important reference committee reports was submitted on the second day. This came from the year-old Interim Committee on Executive Session, appointed in San Francisco in 1946; this committee had rendered its first report on the Rich Associates in Chicago in 1946 and had been continued for further study. The Committee consisted of Bates of Pennsylvania, Buntz of Georgia, Carey of Texas, Hein of Ohio, Lewis of New Jersey, McGlendon of California, and Scannell of Massachusetts. The matters at issue were public relations and the association of the American Medical Association with the National Physicians Association. The Reference Committee, after long study and considerable expense, brought in a report completely justifying the liaison or co-operation with the National Physicians Association, concluding by recommending that a change be made in the public relations consultant of the American Medical Association. As a matter of fact, the Rich Associates through Mr. Rich himself and the newly appointed Executive to the General Manager, Mr. Swart, anticipating our report, resigned even before our report was made to the House of Delegates. Our report was unanimously approved and the committee discharged.

At the dinner meeting given that evening to the House of Delegates by the Trustees, there was presented by a member of the Postmaster-General's Department the new stamp commemorating the Centennial of the American Medical Association. This is an unusual stamp and of particular significance. The ninety million stamps issued to the Atlantic City visitors were, I believe, all sold on the fifth day of the convention (many visitors taking sheets of 500–1000 of these beautiful

three-cent stamps). They portray the doctor at the bedside of the sick child with the peasant parents near by.

All through the meeting, in the reports of officers, reference committees, and other addresses, emphasis was placed on the *general practitioner*, his important place in the community, and the necessity for helping him in all ways, especially with scientific exhibits. This came to a climax when on the last day of the meeting of the House of Delegates it was decided to hold the supplementary or mid-winter meeting of the House in different centers each year (instead of in Chicago as heretofore) followed by a *two-day scientific exhibit for the general practitioner only*. This gives the answer to those who have insisted that the day of the general practitioner is done. This is an epochal event and one of the most important moves the American Medical Association has ever made.

There is much profitable reading in the pages of the *Journal* with reference to this centennial meeting; this is to be found in the issues of June 21, 28 and July 1. Especially worthwhile are the reports of the councils on Medical Education and Hospitals, National Emergency Medical Service, Medical Service and so forth.

On the second morning, short addresses were made by various visiting guests, particularly those from England, Iceland, Australia, Denmark, Syria, Cuba, Venezuela, Guatemala, Canada, Switzerland, Mexico, Colombia, China, Argentina, Norway, Hungary, Saudi-Arabia, Panama, Belgium, Sweden and Finland. Various resolutions having to do with the specialty boards and their policies were introduced and freely discussed. Most important was the supplementary report of the Council on Medical Education and Hospitals, which we believe should be presented in full. The report is as follows:

MR. SPEAKER. The Council on Medical Education and Hospitals has directed me to introduce the following supplementary report:

Considerable thought has been given to devise ways of upholding the prestige of general practitioners so that they may be encouraged to provide the citizens of our country with the kind of medical care which they are peculiarly qualified to furnish and for which there promises to be continued need.

The establishment of a Section on the General Practice of Medicine by this House in 1945 was an important step forward. Interest in this section was at once apparent as shown by a registration of 939 at the 1946 Scientific Assembly and by the attendance of these registrants at the various meetings. This House has also expressed its approval of the organization of sections on general practice in state and county medical societies.

In spite of this, certain hospitals have inaugurated as a matter of policy limitation of their staff appointments to physicians certified by specialty boards or holding membership in certain medical societies. Such a policy is contrary to the principles of the Council and seems unsound. In publications which have dealt with hospital standards, the Council has expressed repeatedly the need for a hospital staff of high quality; it has never mentioned certification by a specialty board or membership in a special medical society as an important credential.

Certain institutions have assured for themselves the inclusion on their staffs of properly qualified general practitioners by the intramural establishment of "General Practice Sections." An excellent description of how such a section actually operated over a period of eight years in a 450 bed hospital appeared on pages 15 through 16 of the May 3, 1947, issue of the *Journal of the American Medical Association*. Reprints of this article will be distributed by the Council to every registered hospital in the United States.

On the whole, so much uncertainty appeared to exist in the minds of many boards of trustees of hospitals about the propriety of establishing such sections as to lead this House at its meeting in San Francisco a year ago to adopt a significant resolution. This was reported favorably by the Reference Committee on Medical Education and adopted by the House; part of this resolution is quoted:

"WHEREAS, Many hospitals have not established general practice sections in their visiting active staffs and their governing heads are doubtful whether such action has the approval of the bodies which set up the rules and regulations for the approval of their hospitals for interns and residents; therefore be it

Resolved, That hospitals should be encouraged to establish general practitioner services. Appointments to a general practice section shall be made by the hospital authorities on the merits and training of the physician. Such a general practice section shall not per se prevent approval of a hospital for training of interns and for residencies. The criterion of whether a physician may be a member of a hospital staff should not be dependent on certification by the various specialty boards or membership in special societies."

Copies of this resolution have been sent to the American College of Surgeons, the American College of Physicians, the American Hospital Association, the Protestant Hospital Association, the Catholic Hospital Association and to each hospital registered by the Council.

To carry forward the intent of the resolution, the following report was published by the Council in *The Journal*, page 95, in the May 3, 1947, issue:

> At the direction of the House of Delegates of the American Medical Association some years ago, the Council on Medical Education and Hospitals formulated standards for the establishment of American boards for the certification of specialists and for the conduct of hospital residencies providing training in the various special fields of medicine. The aim was to improve the quality of training at this level of medical education. The physician responsible for directing such hospital training should himself have had training and experience approximately equivalent to that required of certification applicants, whether or not he is actually certified. But it was never intended that staff appointments in hospitals generally, or even in hospitals approved for residencies, should be limited to board certified physicians, as is now the policy in some hospitals. Such policies, if practiced extensively, are detrimental to the health of the people and, therefore, to American medicine. Hospital staff appointments should depend on the qualifications of physicians to render proper care to hospitalized patients, as judged by the professional staff of the hospital, and not on certification or special society memberships.
>
> In this opinion the Council has the full concurrence of the Advisory Board for Medical Specialties, which represents all the American Boards in the specialties. At the February, 1947, meetings of the Advisory Board it was unanimously voted to adopt as the sentiment and policy of the Advisory Board the recent resolution passed by the American Board of Surgery, which reads:
>
> > The American Board of Surgery is not concerned with measures that might gain special privileges or recognition for its certificants in the practice of surgery. It is neither the intent nor has it been the purpose of the Board of Surgery to define requirements for membership on the staffs of hospitals. The prime object of the Board is to pass judgment on the education and training of broadly competent and responsible surgeons — not who shall or shall not perform surgical operations. The Board specifically disclaims interest in or recognition of differential emoluments that may be based on certification.
>
> Since February, several separate American Boards in the various specialties have taken similar action. The Council on Medical Education and Hospitals of the American Medical Association is completely in accord with this principle.

The Council now asks authority to use still another level to carry forward the intent of the resolution. It recommends that Section 3, paragraph 6, of the "Essentials of a Registered Hospital" now reading:

"6. Staff sections, such as medicine, obstetrics and surgery, should be organized as may seem wise"

be amended to read:

"6. Staff sections, such as medicine, obstetrics, surgery, general practice, etc., should be organized as may seem wise."

This amendment is proposed in the belief that even so small a change in words of the Essentials may be of help in promoting the intent of the resolution adopted by this House a year ago.

The desirability of doing this is plain. The establishment of an American Board of General Practice is being discussed by the Section on the General Practice of Medicine, by the Council and by the Advisory Board for Medical Specialties. The wisdom of establishing such a specialty board at this particular time is debatable. Wider realization and greater use of the contributions which skillful general practitioners can bring to hospitals may make superfluous the need for their certification by a specialty board.

Also discussed at length in the report of the Board of Trustees was the formation of a World Medical Association. At a preliminary meeting held some weeks ago, Drs. Bauer and Henderson representing the American Medical Association went to London, and they, with Dr. Irons, are to represent the Association at a meeting to be held a little later this year in London. This would seem to be the opportunity and responsibility of the American Medical Association to assist in the development of a world medical front in meeting problems as they develop in the councils of world health organizations and in the divisions of the United Nations.

Simultaneously, there is groundwork being done for a Pan-American Medical Federation. Here, also, much work has been done by three members of the American Medical Association in connection with members from Canada and Central and South America. A fairly long plea for this Pan-American Federation was presented by the delegate of the Pan-American Congress from Cuba; his proposals can be found on Page 796 of *The Journal*, June 28.

At the inter-session luncheon of the House of Delegates Tuesday, June 10, excellent addresses were made by Secretary of War, Robert P. Patterson and Assistant Secretary of Navy for Air, John N. Brown. Secretary Patterson's speech was so important that we believe it should be incorporated in this report and later printed as a separate article in the *New England Journal of Medicine*. Some of the measures he proposes chart a new policy in a governmental agency to provide medical care in peacetime. The reading of this report is a "must" and is as follows:

> Your consideration in inviting me here this afternoon to discuss the Army Medical Corps' pressing problem is a courtesy that I appreciate very much.
>
> You are a busy group, with many important questions to discuss, so I shall get right down to the facts. However, I do want to take time to repeat the statement that I made this morning before the General Scientific Meeting:
>
> "The medical service of the American Army in World War II was the finest of any Army in the world."
>
> It is one thing to express a determination on the Army's part to maintain its medical service on a par with that provided from 1941 to 1946. It is quite another thing to recruit in peacetime the number and type of physicians that a medical service of this high quality requires.
>
> The motive of patriotic self-sacrifice that led forty-seven thousand of the medical profession to volunteer their services in war cannot be depended on today to provide the necessary physicians for the Army. It is not to be expected that it should. The fact remains however, that the Army must continue to count on the patriotism of the medical profession in other ways than direct service. Your continued interest in the Medical Department, your co-operation and your support are necessary. Without them no program can be successful.
>
> I need not labor the point that in these troubled times the Army is indispensable to our national safety. Most of our soldiers are on active service overseas, chiefly in Germany, Austria, Japan and Korea. They are keeping the peace, with the result that we may meet here without excursions and alarms. But the Army cannot be strong unless we have a strong medical service. The predicament of the War Department in getting medical officers is therefore a matter of patriotic concern to the whole medical profession. If there is a matter of greater urgency, I do not know what it is.
>
> Present plans of the War Department call for an Army of 1,070,000 men. We shall need an Army of more or less that size so long as we have our present commitments for occupation abroad and national security at home.
>
> Six thousand doctors are required to provide adequate medical service for an army of 1,070,000 strength. At present we have five thousand doctors in the Medical Corps. However, only eleven hundred of these are in the Regular Army. If the present state of national emergency were to be terminated we would lose all our doctors except those in the Regular Army. Even if the emergency remains in effect, the younger officers now on temporary service will be leaving in large numbers on expiration of their two years' service. Unless prompt measures are taken, the prospects are that we will be short thirty-seven hundred doctors by mid-year of 1949, and short forty-four hundred doctors, or more than two thirds of our requirement, by mid-year 1950.
>
> We must therefore make every effort to induce as many as possible of these officers to volunteer for further duty in the Medical Corps, and we must also actively recruit physicians from civilian life.
>
> To date the results of our efforts to build up our professional medical personnel have been disappointing. The response to the invitation to medical officers on temporary duty to become part of the Regular Army fell far below expectations.
>
> There are many reasons why medical officers of the Army of the United States — the A. U. S. — did not respond to the invitation to become part of the Regular Army. I do not propose to go into those reasons. We know them, and you know them. Through the work of the Secretary of War's Medical Advisory Committee that I asked to help the War Department on its medical program, those reasons were compiled and presented to the Army in a way that required the Army to do something by way of cure.
>
> The Army is going to do something about it. We have already begun — and we intend to continue, with your help, until we have solved the problem. A major step in our program to provide a professionally competent and adequate medical service for the Army is the introduction in Congress of legislation to "provide for the procurement of physicians and surgeons in the Medical Department of the Army." That legislation is identified in the House of Representatives as H. R. 3174, and in the Senate as S. 1143.
>
> At a casual reading of the bill, it would seem that the principal purpose of that legislation is to provide more pay for medical officers. Such a conclusion would confuse the means with the end. The actual purpose of that bill is to promote and enhance the professional standing of the Army Medical Corps.
>
> The War Department is convinced, after more than one hundred and seventy years of close association with the medical profession, that the skill of the American medical man cannot be bought for dollars and cents. But it is given generously as a matter of patriotism and professional pride. The doctor can have such a pride in the Army medical service only when that service has the highest possible professional dignity. I am already on record with the statement made last year that it is my sincere desire to maintain the medical standards of the Army at the highest possible professional level. I want now to reiterate that statement as expressing both the Army's and my determination. General Eisenhower also expressed the Army's position when, in a memorandum to the Army's top commanders, he said:
>
> > The realization of our objective places upon us, the military, the challenge to make our professional officers the equal in knowledge and training of civilians in similar fields and make our professional environment as inviting as those outside.
>
> The War Department knows that a medical service equal to the needs of our modern Army can be obtained and continued only by establishing a professional level

equal to the best in civilian practice. Establishment of that professional level is our goal. All other advances, benefits or gains serve only as steps toward that goal.

Yet, we intend to be practical in seeking our objective. We realize that no governmental agency can hope to give to the doctors who will serve it a direct financial return equal to what the best men in the profession can make in civilian life. At the same time, we cannot expect and do not intend to ask, competent doctors to devote their years to the Army without compensation that at least is worthy of the important position they hold and adequate for their needs.

The legislation now before Congress is our answer to that part of the problem, and for that reason I want to go over it with you. It must have your support, not only to win Congressional approval, but to serve its purpose — the improvement of the professional status of the medical officer.

The first part of the bill would give to all Medical Corps officers with less than thirty years' service $100 a month extra pay. The increase would apply both to regular officers and to nonregular officers who volunteer for extended active duty for a period of one year or longer.

The next three sections of the bill are the basis of our efforts to improve the professional status of the Medical Corps. Two of these sections also deal with specialists, and they are of great importance. The quality of medical care will be determined by fulfillment of our needs for surgical and medical specialists. These we must have if we are to provide the Army with a high standard of professional care.

About thirty per cent, or eighteen hundred, of the six thousand medical officers required for the Army of the present strength should be specialists. So far, we have about one-fifth of that total, including those in re-training. In obtaining sufficient specialists, the Army is handicapped not only by the small pay in comparison with earnings in civilian practice, but also by the competition of other Government agencies paying more than the Army presently is authorized to pay.

Titles II and IV of the bill now in Congress would do much to improve the Army's position in retaining and obtaining specialists for the Medical Corps.

Title II provides for an increase of 25 per cent in the base and longevity pay of those Medical Corps officers who qualify as specialists, during the time such officers are so qualified. Certification of a recognized American Specialty Board would be required for qualification as a specialist in the Medical Corps, but all Medical Corps officers, regular and non-regular alike, would be eligible to qualify. The Veterans Administration already has the right to make such extra payments to its specialists.

Title IV of the proposed legislation would permit the Army to make original appointments of outstanding medical specialists in the Medical Corps from civilian life, in grades and ages above those in which such appointments now can be made. Under the bill appointments as specialists could be made in any grade up to and including colonel, the grade for each appointee being determined by his qualifications. Doctors thus commissioned from civilian life would be only those certified as specialists by a recognized American Specialty Board. In the past, statutory limitations prevented our commissioning such officers at grades commensurate with their abilities. As a result, we were unable to obtain the services of specialists even though they were available.

If the Medical Corps is to attract physicians through the opportunities it offers for professional work of high quality it is obvious that within the Corps there must be men in key positions who set the standards for professional work and guide the careers of young medical officers. To provide such advisers to the Surgeon General, the Bill, under the provisions of Title III, authorizes the direct appointment in the grade of brigadier or major general of four physicians distinguished respectively in the fields of medicine, surgery, neuropsychiatry and preventive medicine. The mission of these leaders would be to supervise professional standards, educational programs and the assignments of professionally qualified officers. They will carry in addition to their rank, the titles of professors.

Appointments to the four professorships would be made by the President of the United States, with the consent of the Senate.

The Army Medical Department hopes to meet its responsibilities with commissioned personnel. However, if we are unable to procure the necessary military personnel, we must be able to utilize the services of civilian doctors. Title V of the new bill will give us the necessary authority. It will permit the appointment of civilian physicians, in such numbers and for such periods of time as may be necessary, without regard to Civil Service requirements, and is substantially identical with the authorization given some eighteen months ago to the Veterans Administration.

Properly qualified civilian doctors would be appointed under this legislation in one of six grades, the annual pay scale of which would range from $3640–$4300 for junior grade up to $8750–$9800 for chief grade. Further, if a civilian doctor thus appointed is designated a specialist, he would receive an allowance equal to 25 per cent of his base pay up to a total of $11,000 a year.

Employment of civilian physicians on a temporary full-time, part-time or fee basis also would be authorized by this legislation.

These five sections sum up the legislation now before Congress to improve the professional status of the Army Medical Corps. They are, in the opinion of the War Department, the best answer to the problem of procuring qualified medical officers.

Other plans were considered and found wanting. These included subsidization of the education of prospective Medical Corps Officers, and establishment of an Army medical school. Still other recommendations and suggestions for improving the Army medical service are being studied seriously.

The basic need of an adequate Army medical service is a professional competence second to none. The legislation now before Congress is designed to go a long way toward making that high grade professional attainment possible. The War Department will do everything else in its power to establish and foster the professional environment required. I ask your support of this legislation and of our entire Medical Corps program.

The meeting lasted four full days, mornings and afternoons. As a result, very few members of the House of Delegates had an opportunity to visit the scientific exhibit, by all odds the best ever presented. Likewise, the commercial exhibit was a remarkable piece of organization. Obviously, the opportunity for listening to valuable papers on clinical and basic scientific subjects did not exist for the delegates. In short, the four-day session for the House of Delegates was *uninterrupted work*. On the final afternoon (Thursday), the following were the highlights:

1. The election of Dr. Sensenich as president-elect.
2. The election to the Board of Trustees of Dr. E. J. McCormick of Toledo. He is a hard worker and as conscientious a delegate as the American Medical Association possesses.
3. The change in locale of the annual meeting of the American Medical Association for 1948, 1949 and 1950. In 1948 the change will be to Chicago instead of St. Louis. In 1949, Atlantic City instead of New York. In 1950 it will be San Francisco.
4. The supplementary meeting of the House of Delegates in mid-winter not necessarily to be held in Chicago but in various centers changed each year; two-day sessions to be followed (as stated previously) by two-day scientific exhibit for the general practitioner. Name of the place for the December, 1947, meeting has not yet been determined.

In conclusion, the meeting of the House of Delegates was a most satisfactory one although rather too long drawn-out for reasons given above. The great number of resolutions introduced were fairly and patiently considered, and we feel certain as we have in years past, that once again we saw in operation a first-rate working medical democracy; our opinion was confirmed by all our foreign guests who spoke on the subject.

DAVID D. SCANNELL

APPENDIX NO. 9

Committee to Study Special Services

This committee has been asked to define hospital services and medical services and to establish the proper relations between physicians and hospitals.

To gain as accurate an appraisal as possible of the sentiments of the physicians of the Commonwealth on these important problems, a post card was sent to the 6000 participating Blue Shield physicians, requesting their opinion. Fifty-one replies were received. Thirty-four of these expressed the belief that nonmedical hospital services and medical hospital services should be strictly separated. None opposed this separation. Of the remaining 17, the majority complained of their exclusion from hospital staffs and seemed to believe that the solution of this problem constituted part of the committee's function. Although the committee is sympathetic with physicians who are faced with this problem, it considers the problem to be outside the scope of its activities and not implied in the order of the Council establishing its duties.

In attempting its task the committee is well aware of the fact that conditions may properly vary in different localities and in different institutions, that the practice of medicine is undergoing rapid changes under unusual stresses, and that the concepts of tomorrow may vary markedly from those of today.

There are, however, certain fundamental principles that should not change if the profession of medicine is to discharge its obligation to society on an increasingly high level.

First, we accept the principle that the primary object of medical practice is to deliver the best possible care to the patient. Second, we believe that this objective can best be attained by an independent and unfettered profession, conscious of its ideals and its responsibilities.

These principles are basically defined in Chapter III, Article VI, Section 5, of the *Principles of Medical Ethics of the American Medical Association*:

> It is unprofessional for a physician to dispose of his professional attainments or services to any lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit a direct profit from the fees, salary or compensation received to accrue to the lay body or individual employing him. Such a procedure is beneath the dignity of professional practice, is unfair competition with the profession at large, is harmful alike to the profession of medicine and the welfare of the people, and is against sound public policy.

Nothing in this report refers to interns, residents or fellows. The committee is aware that this problem deserves separate consideration.

In accordance with these principles the committee submits the following definitions and recommendations:

Services Rendered in Hospitals

Nonmedical Hospital Services

Nonmedical hospital services are defined as those services, technical and nontechnical, provided by other than a registered physician, which are required for the care of patients, the making of a diagnosis and the treatment and prevention of disease; and those services rendered by a registered physician in an administrative capacity or as the head of a department when such services do not include the obtaining or interpretation of information in behalf of an individual patient.

These shall be considered to include the following: administration; nursing; social service; record room and library; pharmacy; dietary service; housekeeping and laundry; maintenance of building and grounds, including the provision, maintenance, repair and replacement of technical equipment and supplies; provision of technical and nontechnical personnel and their qualified supervision; reports without interpretation from the clinical laboratories; and such other services as may be necessary for the operation of a hospital.

Medical Hospital Services

Medical hospital services are defined as services other than administrative, rendered by a registered physician directly or indirectly to or in behalf of an individual patient for the obtainment and interpretation of data, including consultation and advice, for the diagnosis, treatment and prevention of disease. Such services will embrace the general and special practice of medicine, surgery and obstetrics, and the practice of the related specialties including anesthesiology, physical medicine, radiology, pathology and clinical pathology including bacteriology, clinical chemistry and other clinical laboratory specialties.

It is accepted as a basic principle of good medical practice that a professional interpretation should accompany the report on radiologic examinations and on materials and tissues examined by the pathologist.

Establishment of Proper Relations between Physicians and Hospitals

To establish principles governing the proper relations between physicians and hospitals, your committee makes the following recommendations:

> That the medical costs of hospital care be separated from the nonmedical costs, as can be done by existing and accepted methods of cost-accounting, and that they appear thus separated on the statement submitted to the patient.
>
> That bills for all medical services be rendered in the name of the physician or physicians performing the services.
>
> That a basic principle in the establishment of charges should be that each department be self-supporting. This principle should be so applied that neither the hospital nor the physician rendering the service will exploit the patient or each other.
>
> That fees for medical services collected by the hospital be established by joint action of a representative committee of the staff and the governing body of the hospital and including also the head of the department and the administrator.
>
> That the basis of financial arrangement between hospital and physician may be salary, commission, fees, or such other method as will best meet the local situation, with due regard to the needs of the patient, the community, the hospital and the physician.

It is the opinion of the committee that acceptance and practice of these principles will clarify the confusion that now exists regarding responsibility for the payment of medical hospital services and nonmedical hospital services, as defined above, by prepayment and other insurance plans.

In conclusion, the chairman wishes to record the fact that during the period of its intensive labors, holding prolonged meetings under adverse weather conditions, the committee averaged 90 per cent attendance. He wishes also to express the appreciation of the committee to those consulting advisers and others who have given so freely of their time: the president of the Society, Dr. Edward P. Bagg and the president-elect, Dr. Daniel B. Reardon, Drs. Allan M. Butler and Vlado A. Getting, of the Committee on Medical Economics, Dr. John F. Conlin, director of medical information and education of the Massachusetts Medical Society, and Dr. Nathaniel W. Faxon, substituting for Dr. Charles F. Wilinsky at the final meeting.

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Weekly Clinicopathological Exercises

FOUNDED BY RICHARD C. CABOT

TRACY B. MALLORY, M.D., *Editor*

BENJAMIN CASTLEMAN, M.D., *Associate Editor*

EDITH E. PARRIS, *Assistant Editor*

CASE 33491

PRESENTATION OF CASE

A seventy-one-year-old night watchman entered the hospital complaining of pain in the epigastrium and chest.

He had always been in good health until six weeks before entry, when he began to have epigastric distress, which he described as a vague soreness or feeling of pressure. This was not related to meals or other activities. During the following few weeks his appetite fell off, and he grew progressively weaker. The epigastric distress became more marked and more like pain in quality. This pain did not radiate. Two weeks before admission rather severe pain developed in the lower portion of the chest on both sides, which was definitely aggravated by coughing and deep breathing and relieved somewhat by lying on the right side. The pain often radiated to the left shoulder and axilla but was also felt at times in the right axilla. The patient denied fever or chills. There had been no nausea, vomiting or evidence of blood in the stools. The bowels moved normally until the week prior to admission, when the food intake decreased markedly. He had lost 15 pounds in weight during this illness.

Physical examination revealed a well developed, slim man who appeared chronically ill. He complained of an inconstant pain in the left shoulder and epigastric soreness. There was obvious distress on cough and inspiration. The chest showed poor expansion and was somewhat increased in the anteroposterior diameter. There was slight dullness in the left upper portion of the chest, and the breath sounds in the lower left portion were decreased. The diaphragmatic descent on both sides was poor. The heart was of normal size, with regular rhythm and no murmurs. There was slight distention of the abdomen, with tenderness and spasm in the epigastrium. High in the epigastrium, 5 cm. below the xiphoid process, an ill defined, hard, tender mass was palpable. This seemed to pulsate, and over it a soft to-and-fro souffle was heard. Liver dullness extended about 2 cm. below the costal margin. The prostate was diffusely enlarged to about twice the normal size.

The temperature was 100.6°F., the pulse 66, and the respirations 28. The blood pressure was 125 systolic, 50 diastolic.

X-ray studies showed no abnormality of the esophagus, stomach or duodenum. There were a few diverticulums in the sigmoid. No abnormal soft-tissue masses or calcifications were noted in the abdomen. Pyelograms disclosed good excretion of dye by both kidneys, without deformity of the calyxes. A chest film revealed a small amount of fluid in the right pleural sinus and an area of increased density within the lung in the left pleural sinus. The heart was normal in size and shape. The aorta was not unusual. No shadow representing the gall bladder was demonstrated by Graham test.

Examination of the blood revealed a red-cell count of 2,750,000, with a hemoglobin of 9 gm., and a white-cell count of 7800, with 72 per cent neutrophils. Urinalysis demonstrated a specific gravity of 1.017, a + test for albumin and no sugar. The nonprotein nitrogen was 48 mg. per 100 cc., the total protein 6.13 gm., the albumin 3.94 gm., the globulin 2.19 gm., the calcium 8.8 mg., and the phosphorus 3 mg. per 100 cc.; the serum amylase was 63 units, and the phosphatase 3 units. The van den Bergh reaction was 0.2 mg. per 100 cc. direct and 0.4 mg. indirect. The prothrombin time was 22 seconds (normal, 19 to 20 seconds). Three stools were guaiac negative.

During the patient's stay on the ward his condition remained unchanged for the first ten days. He continued to complain of epigastric pain. To some observers the epigastric mass seemed to have increased slightly in size during that period. In addition redness and tenderness were noted along the course of the left superficial saphenous vein. A review of the chest films showed multiple areas of increased density, some of which were linear in both lung fields.

On the twelfth hospital day the patient complained of severe pain under the left costal margin, which radiated up the side of the chest. Coughing and deep inspiration caused severe pain in this area. Later that day he became extremely weak and cyanotic and vomited 200 cc. of normal-appearing gastric contents. This was followed by unconsciousness and two generalized convulsions. He regained consciousness for a brief period, but a short time later gradually became comatose and expired.

DIFFERENTIAL DIAGNOSIS

DR. F. DENNETTE ADAMS: We have two distinct types of pain to explain: soreness or distress in the epigastrium soon developing into pain and, a month later, what appears to have been a new or different episode, located in the chest and aggravated by breathing and coughing. Although they may have originated from the same source, I believe that they

did not; it therefore seems wise to consider them separately.

Occurring in a seventy-one-year-old man, the epigastric pain coupled with loss of appetite, increasing weakness and, what is very important, rapid loss of weight is most suggestive of malignant neoplasm. Quite properly, one first suspects the stomach. But considerable doubt is cast on this suspicion by the rapidity with which the illness developed and the absence of pain-to-food relation. Often in gastric carcinoma, because of ulceration, partial obstruction or interference with normal motility, pain is increased or decreased by eating. Failure of the roentgenologist to demonstrate a lesion also directs attention away from the stomach, although it by no means excludes disease in this organ.

DR. WALTER BAUER: May I interrupt at this point to say that this pain was rather constant?

DR. ADAMS: Did it go into the back?

DR. BAUER: I do not remember; I think not. But the constancy of the pain should be borne in mind. It was not related to meals. It was present all day and whenever the patient awakened at night.

DR. ADAMS: The easily palpable mass in the epigastrium points to a malignant tumor. But the picture is confused by the added facts that the mass pulsated and that, over it, a souffle could be heard. A highly vascular tumor might produce a souffle; I doubt if it would pulsate. These two signs taken into consideration with the character of the pain, emphasized by Dr. Bauer, demand consideration of abdominal aneurysm. In my opinion, however, the other symptoms, notably rapid loss of appetite, weight and strength, exclude this diagnosis. The pulsation and souffle must be discounted — one can explain them on the basis of transmission from the aorta as a result, perhaps, of pressure on the vessel by the mass itself.

The laboratory findings are not especially helpful. The anemia, with the history and stool examinations tending to exclude alimentary-tract bleeding, is consistent with cancer. The slight elevation of blood nonprotein nitrogen could have been caused by recent starvation and dehydration. The slightly increased serum amylase (54 to 55 units is to be regarded as top normal) may or may not have been significant. At least, it is not inconsistent with the diagnosis I propose to make.

I cannot get away from the speed with which the illness developed. The pain in the epigastrium and the rapid loss of weight and strength must have been due to a malignant lesion. The disease most likely to cause them in so short a period is cancer of the pancreas. I know of no other that, once it takes hold, will pull a patient downhill more quickly. The mass, the elevation of serum amylase and the negative gastrointestinal x-ray examinations can be regarded as important supplementary or confirmatory signs, as can the disturbance that I will discuss in connection with the pain in the chest. Lymphoma should always be mentioned. This man could have had a lymphoma, but there are no special hints in the picture. The mass conceivably could have been the gall bladder, but I doubt it. We have no filling on the dye test. Perhaps autopsy will show a few small stones or a chronically diseased gall bladder, but if so, these findings will be incidental. The gall bladder could have been normal. Certainly, the primary cause of the illness was not in that organ.

We must now turn to a consideration of the pain in the chest — thus far disregarded but by no means forgotten: repeated attacks first on both sides then on one or the other, often with extension into the shoulders or axillas and with aggravation by deep breathing. In a chronically ill person of this age, such attacks are almost certainly due to pulmonary embolism, irrespective of what can be seen by x-ray study. Even if the physical and roentgenologic examinations of the lungs were entirely negative, or if I were forced to make a diagnosis without benefit of x-ray film, I would come out flat-footedly with one of pulmonary embolism. Another important bit of evidence should be mentioned; it tends to confirm both primary and secondary diagnoses. It is well established that carcinoma favors the development of thrombophlebitis, and of the various carcinomas, that of the pancreas is the one most likely to do so. We have evidence of thrombophlebitis of one saphenous vein; even if no such signs could be demonstrated, I would still make the diagnosis.

May we see the x-ray films?

DR. TOUFIC H. KALIL: In the chest films an area of increased density is apparent in the region corresponding to the base of the left lower lobe, and the fluoroscopist seemed to think that this lesion was in the lung itself. These are linear areas of increased density that extend from the hilar region to the right lower lobe and the left lower lobe behind the heart, consistent with old, healed infarcts on the right and on the other side consistent with fresh infarction. So far as the abdominal condition is concerned, I do not see any outline of a soft-tissue mass except in the lateral film of the stomach. There may be some pressure on the posterior wall. Ordinarily, with carcinomas of the pancreas, particularly those in the head of the pancreas, there is widening of the duodenal loop. I do not see any in these films.

DR. ADAMS: With carcinoma of the head of the pancreas, we would also expect to find jaundice. If my reasoning is correct, the lesion will be found in the body of the pancreas.

The terminal episode seems typical of a large pulmonary embolism: another severe pain in the side, again with extension upward and aggravated by breathing and coughing, was undoubtedly pleuritic and probably diaphragmatic; later, cyanosis and unconsciousness occurred, followed by death. The

cyanosis is typical of a large pulmonary embolism; the spells of unconsciousness one can explain on the basis of temporary cerebral anoxia due to the circulatory insults. If death had been due to rupture of an abdominal aneurysm, abdominal or back pain or both would have been intensely severe, the picture of shock would have developed, cyanosis would not be striking, and the very last episode would have been longer — probably half an hour to a few hours.

Perhaps I am vulnerable in discounting the pulsation and the souffle related to the mass and the failure of the gall bladder to fill with dye, but the other features of the case are so convincing that they force me to the diagnoses of carcinoma of the body of the pancreas; multiple thrombophlebitis; and multiple pulmonary embolism and infarction.

DR. TRACY B. MALLORY: Dr. Bauer, will you tell us your impression?

DR. BAUER: I thought that the patient had carcinoma of the pancreas. I must admit that when I first examined him I did feel this pulsating mass. From the time it was noticed the question was raised repeatedly whether or not we were dealing with an aortic aneurysm. Dr. Levine, who made the ward visit with me one day, favored that diagnosis. I thought that the nature of the pain itself was much more in favor of cancer of the pancreas, and I adhered to that. I was in error in the beginning when I interpreted the chest pain as part and parcel of one disease. Subsequent events left no doubt that the cause of death was pulmonary embolism.

DR. FRANCIS D. MOORE: Is it not worth while observing that carcinoma behind the head of the pancreas can coexist with a palpable mass and not produce jaundice, a space-occupying lesion away from the ducts? Is it not notoriously a silent disease? Here was a man with pain that was bothering him a great deal, — rather sharp pain, — and as I listened to the story it sounded more like a vascular pain than a retroperitoneal pain.

DR. BAUER: I did not think so as I saw him. In fact, this mass was not so impressive as might be gathered from the record. I thought that a slight compression of the abdominal aorta was responsible for the bruit that was heard.

DR. ADAMS: I reasoned the way you did, Dr. Moore — but came up with a different conclusion: the tumor had been growing, silently perhaps, for a long time, but once it announced its presence, rapid decline of the patient occurred. This is my conception of the pattern usually followed by carcinoma of the pancreas. I do not see why a patient with aneurysm should go downhill so rapidly.

DR. MOORE: Why not? He could have had a palpable, pulsating mass that came apart as it dissected around in new areas.

DR. ADAMS: Possibly. But the 3 cases of abdominal aneurysms that I can recall at the moment have not shown constitutional manifestations such as those that were predominant in this case. The patient had pain, — in front or in back, — but that is all until serious rupture occurred.

DR. BAUER: It is a peculiar story for dissecting aneurysm. It was not intermittent pain. So far as I could ascertain the pain was present constantly twenty-four hours around the clock with no history of an initial episode of severe pain with associated shock followed by a period of relative freedom and then recurrence. It was not that type of story.

DR. BENJAMIN CASTLEMAN: Pulsation is not observed with dissecting aneurysm; it occurs only with a saccular aneurysm.

DR. BAUER: The question was whether or not it had dissected.

CLINICAL DIAGNOSES

Carcinoma of pancreas.
Pulmonary infarcts, multiple.

DR. ADAMS'S DIAGNOSES

Carcinoma of pancreas.
Multiple thrombophlebitis.
Multiple pulmonary embolism and infarction.

ANATOMICAL DIAGNOSES

Carcinoma of body of pancreas.
Thrombophlebitis of leg veins.
Pulmonary embolism and infarctions, multiple.
Diaphragmatic pleuritis.
Arteriosclerosis, generalized.
Cardiac hypertrophy, slight.

PATHOLOGICAL DISCUSSION

DR. MALLORY: At post-mortem examination we found a large tumor mass arising from the body of the pancreas. The head and tail were free. The tumor had metastasized rather extensively to the regional lymph nodes, especially the retroperitoneal nodes, and a number of large nodes were found almost completely surrounding the aorta, which may have been compressed to some degree. There were scattered metastases in the liver as well.

The major pulmonary arteries showed no embolus, but when the small arteries in the lung were dissected, emboli were found in nearly every branch in both lower lobes and in the right middle lobe. These had resulted in infarction, whereas in the upper lobes emboli were also present but had not caused changes in the lungs. It is therefore likely that the terminal episode was the final embolic occlusion of the last patent arteries in the two upper lobes. The entire diaphragmatic pleura of both lower lobes and the superior surface of the diaphragm were covered with thick, fibrinous exudate about 2 mm. thick. There is always some degree of pleuritis associated with pulmonary infarction, but it is relatively unusual to see such a thick, dense exudate as was present in this case.

The other findings were essentially incidental. There was severe arteriosclerosis of the abdominal aorta but no aneurysm or dilatation. There was a moderate grade of vascular nephritis, as well as a slight degree of cardiac hypertrophy, but nothing else of significance.

DR. ADAMS: What about the gall bladder and bile ducts?

DR. MALLORY: They contained no stones.

DR. ADAMS: Did the patient have thrombosis throughout the vein, which I rather associate with cancer of the pancreas?

DR. MALLORY: He had extensive thrombosis of the saphenous system and the deep veins in the calves of both legs.

DR. MADELAINE BROWN: Was the brain examined?

DR. MALLORY: No.

DR. ADAMS: Three features of this case, in my opinion, cannot be emphasized too often. The first is the normal gall bladder; failure of the gall bladder to fill with dye does not always indicate gall-bladder disease — a fact frequently disregarded by clinicians and roentgenologists. The second consideration is the minimal signs of extensive thrombophlebitis, and the third the paucity of physical and x-ray signs in the lungs in the presence of extensive embolic disease. The diagnosis of embolic disease of the lungs must be made on the basis of history, backed by a knowledge of when and why it is likely to occur.

CASE 33492

PRESENTATION OF CASE

A sixty-nine-year-old jeweler was admitted to the hospital complaining of paralysis of the legs.

Six months prior to admission he began to experience pain high in the back, radiating around to the axillas and pectoral regions and severer on the left. Two weeks before entry he began to have numbness of the feet that had gradually extended upward to the legs and abdomen and, several days before entry, weakness, which rapidly progressed to paralysis of the legs. For the past two days he had experienced difficulty in voiding. There had been no headaches, vomiting, speech difficulty, dizziness or abnormal smell or taste. There was no history of convulsions or loss of consciousness.

There was a history of syphilis forty years before admission.

On physical examination the bladder was palpable several centimeters above the symphysis. There was complete paralysis of both legs. The arm jerks were normal; the abdominal reflexes were absent. The knee jerks were active, and the ankle jerk was absent on the right and weak on the left. The plantar reflexes were extensor. Pain and temperature sensibility were reduced below the third rib. Touch stimuli of medium intensity were felt on the chest and abdomen but not on the legs, and vibratory sensation was lost below the lower sternum. There was a nontender kyphus or prominence of the upper thoracic spine. The right lobe of the prostate contained a firm, slightly irregular mass.

The blood pressure was 128 systolic, 82 diastolic.

Examination of the blood revealed a hemoglobin of 16 gm. and a white-cell count of 21,600. The specific gravity of the urine was 1.010; the sediment contained rare red and white cells. X-ray films of the chest showed a complete collapse of the third thoracic vertebra, with slight wedging of the body of the second. No definite soft-tissue mass was seen in this region. The collapse was apparently due to destruction of the body of the vertebra. Slight pleural thickening was seen at the base of the right lung; the aorta was sclerotic and tortuous; the heart was within normal limits.

On admission a spinal tap revealed an initial pressure of 0, with no response to jugular compression, 12 lymphocytes per cubic millimeter and a ++ Pandy reaction. Pantopaque introduced at the third lumbar vertebra was arrested opposite the lower margin of the third rib. No cap was observed.

An operation was performed on the day of admission.

DIFFERENTIAL DIAGNOSIS

DR. AUGUSTUS ROSE: May we see the x-ray films?

DR. TOUFIC H. KALIL: The involved vertebra is entirely collapsed and disintegrated. On each side there is a fairly good joint space remaining. Immediately in front of the involved vertebra there is a little soft-tissue swelling.

DR. ROSE: Do you see any other evidence of bone involvement?

DR. KALIL: No; I do not. The second thoracic vertebra looks fairly good.

DR. ROSE: What about the lung fields? Would you say that they are sufficiently clear to rule out x-ray evidence of metastatic disease?

DR. KALIL: Yes; they are.

DR. ROSE: What about the thickening of the pleura? Is that significant?

DR. KALIL: Merely of old disease, especially at the right base and right apex, with a few linear areas of density extending into both apices.

DR. ROSE: There is no active disease, but some soft-tissue swelling around the vertebras, and I suppose you will agree that it is a bone destruction of the body of the vertebra.

DR. KALIL: It seems so, unless it is an old fracture that has finally become decalcified, which might possibly give the same appearance.

DR. ROSE: This was a sixty-nine-year-old man who had had pain in the upper portion of the chest for six months. Two weeks prior to admission, he developed a transverse myelitis. Evidence, particularly that of a spinal puncture, demonstrated that the myelitis was probably due to compression. The patient was promptly operated on. Generally, a

patient with compression myelitis should be operated on as quickly as possible, irrespective of the diagnosis. It has been variously estimated that if spinal cord is mechanically compressed for longer than six to eight hours, recovery is unlikely. Compression produces ischemia. Accordingly, in this patient operation was indicated as an emergency procedure — even though the surgeon very probably had fewer data for diagnosis than we have.

Before considering the various possibilities let us think of the myelitis. The myelitis was not complete. Touch was still felt on the chest and abdomen, although it was not felt on the lower extremities. Some impulses were passing through the compressed area of the spinal cord. The history of pain before the development of paralysis points to irritation of nerve roots, at the level of the third thoracic segment, as in a case of fractured vertebra or pressure from extramedullary tumor. Furthermore, the ascending paralysis with sensory loss is characteristic of an increasing compression of the spinal cord. Complete flaccid paralysis is consistent with compression of the cord, even though the plantar reflexes are extensor. The sensory level points to the level of the lesion. Loss of pinprick or temperature sensation is much more usual from any type of spinal-cord disorder than loss of touch sensation. The tendon reflexes in this case were different from what is expected in a rapidly developing transverse lesion of the upper thoracic cord. With Babinski signs, very active tendon reflexes are usually found. The absence of one ankle jerk and the reduction of the other raise the question of some other neurologic condition, possibly antedating the cord compression. Since we have the history of syphilis we ought to take that into consideration.

We then come to the differential diagnosis of the etiology of the compression. From the destruction of the body of the third thoracic vertebra, the kyphosis, the sensory level and the other neurologic findings, we must assume that the spinal-cord disease was at the level of the third thoracic vertebra. The Pantopaque examination showed no cap formation; the contrast medium was arrested at that level.

What conditions cause destruction of the body of the vertebra and secondary spinal-cord pressure? The first, of course is Pott's disease, or tuberculosis of the vertebra, of which there is no evidence in this case. Primary tumor of bone should come next in consideration but would have caused some distinctive features visible in the x-ray film.

Metastatic disease and syphilis are next in importance. Taking syphilis first, I believe that the history forty years previously may be significant. We are not told about the pupils.

Dr. Charles S. Kubik: I believe that they were normal.

Dr. Rose: The absence of one ankle jerk and the sluggish character of the other, in the presence of transverse myelitis, might be taken as evidence that the patient had at least had neurosyphilis. Normal pupils make this less likely. Even if he had had neurosyphilis, other factors are necessary to explain the present illness. He could have had a gumma of the vertebral body, but again the gummatous lesions of the vertebra have distinctive features on x-ray study and are not usually confined to the body of one vertebra. Could the lesion have been a Charcot joint, with a compression fracture? Again, there would have been definite x-ray evidence, with bone proliferation and involvement of at least two vertebras. Charcot joints of the spine are more often found in the lumbar, weight-bearing joints than in the upper thoracic portion of the spine. Before syphilis is discarded, one must mention gummatous involvement of the spinal dura, which is uncommon but is found in the lower cervical region and may give signs and symptoms of spinal-cord and nerve-root compression.

The rectal examination detected a nodular, slightly irregular firm mass in the prostate. Prostatic carcinoma is prone to metastasize to bone, especially the vertebras. It is therefore possible, and I put as my first diagnosis a vertebral metastasis. The spinal-cord compression was secondary to a pathologic fracture of the diseased vertebra. I do not believe that syphilis played an important role in the present illness.

A Physician: Is there any interpretation of the soft-tissue tumor lying opposite the lesion of the eighth to twelfth thoracic vertebras?

Dr. Rose: I believe that that is the descending aorta, which is tortuous.

Clinical Diagnosis

Extradural upper thoracic spinal tumor.

Dr. Rose's Diagnosis

Carcinoma of prostate, with metastasis to spine.

Anatomical Diagnosis

Carcinoma of prostate, with metastasis to spine.

Pathological Discussion

Dr. William Sweet: This man was operated on under local anesthesia because he had almost complete paralysis of the intercostal muscles. The fluid in the bronchi and lungs could not be raised when he attempted to cough. A laminectomy was carried out on the upper three thoracic vertebras and disclosed reddish tissue suggesting neoplasm not only posterior to the dura but also on both sides and anterior to it. Before the lateral and anterior portions of the neoplasm were attacked the pedicles were removed to permit dissection in a direction always away from the dura and the spinal cord. It adds further stress to the operation in these cases to remove the pedicles, but I have been doing this because my results following laminectomy only have

been uniformly poor in patients with extradural malignant neoplasm who have developed a transverse lesion of the thoracic portion of the spinal cord. In this case a considerable mass of tissue suggesting neoplasm was encountered on the right side of the dura at the level of the second and third thoracic vertebras. The bone of the vertebral bodies anteriorly was also grossly abnormal, and the prognosis for recovery of power in the legs was consequently poor. The postoperative course has thus far borne this out. The patient has recovered appreciation of touch, pinprick and temperature in the lower extremities, but there has been no suggestion of recovery of motor power.

Dr. Kubik: I saw the patient when he was admitted. It seemed quite certain, even without a myelogram, that there was compression of the spinal cord. The level was fairly definite, and metastatic carcinoma seemed the most likely possibility. I thought, as Dr. Rose did, that whatever the lesion might be, immediate decompression of the cord was indicated.

This was a carcinoma of the prostate, with metastasis to the spine, which was responsible for the paralysis. As Dr. Sweet has pointed out, our experience here has been that when paralysis is as severe as it was in this case the prognosis is very nearly hopeless, particularly when the paralysis develops suddenly or very rapidly. It is important to point out that this patient had pain in the chest and back, with radiation anteriorly, for a number of months before he developed any other neurologic symptom. It is more than likely that a diagnosis could have been made much earlier and compression of the spinal cord prevented. In 1942 we had a patient here with carcinoma of the prostate and metastasis to the lumbar spine, as well as with marked weakness of the legs, complete spinal subarachnoid block, xanthochromic fluid and a high protein below the block. Under treatment with stilbestrol the compression of the cauda equina was relieved, the paralysis cleared up, and the patient returned to work. He was all right four years later. We have heard that he was recently admitted to another hospital, presumably because of a recurrence of the metastases.

Dr. Rose: Do you suppose that stilbestrol at the time of the last admission would have been of any value, in the presence of collapsed vertebras and compression on a mechanical basis?

Dr. Kubik: I think that the outlook is thoroughly poor but that the treatment should be tried. There was, as you pointed out, some sensation at the time of operation, indicating that transection of the spinal cord was not quite complete.

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INFLUENZA

Most of the epidemics of influenza that have occurred in New England during the past few years have had their peak of incidence during the months of December and January. Those in which studies have been made here, as elsewhere, have been proved to be due to influenza virus — either influenza A or B. Vaccines containing strains of these viruses are now available commercially and have been used to a certain extent in the last three or four years in attempts to prevent the disease. At this time, therefore, many physicians and other interested individuals and groups are naturally raising the question of the value of such vaccines and whether or not they should be employed.

A comprehensive and critical review of the present status of the influenza problem is contained in this issue of the *Journal*. A report of the Study Committee on Vaccination Against Influenza of the American Public Health Association has also been published recently[1] and at least two preliminary reports on the experiences with vaccination against influenza in 1947 are also available.[2, 3]

One of the important epidemiologic features that has recently been stressed concerning influenza is the apparent periodicity of epidemics of this disease.[4] This theory seems to permit the prediction within certain limits that an influenza epidemic will occur in any given year, as well as the type of influenza virus that is likely to be responsible for that epidemic. On the basis of a two-year to three-year cycle for influenza A epidemics and a four-year to six-year cycle for influenza B, an epidemic of the latter type was expected and materialized during the winter of 1945–46. There were at least 2 chances out of 3 that influenza A would occur during the same year and if it did not occur during that year, it was almost certain to occur the following winter.

Two events have transpired that, although they do not necessarily upset the fundamental theory, were somewhat disconcerting. In the first place, cases of influenza A were identified in several widely scattered areas either at the time of the influenza B epidemic or shortly thereafter.[5-8] Secondly, an epidemic occurring in many parts of this country during the winter and early spring of 1947 was due to influenza A.[2, 3] It is by no means clear that these two outbreaks of influenza A in successive years were sufficiently widespread to be of significance in relation to the basic cycles of the influenza epidemics in this country. The most recent of these outbreaks, however, was disturbing in addition because of the fact that no definite protection was afforded to groups of persons who had been given vaccines containing influenza A and B during the months preceding that outbreak. This failure was in sharp contrast to the fairly good results obtained from vaccination during the influenza A epidemic of 1943–44 and the still better effects reported from immunization with A and B vaccine during the influenza B epidemic of 1945.[1, 3] The failures in 1947 proved to be due to a marked antigenic difference between strains of influenza A responsible for the 1947 epidemic when compared with the strains that had caused previous outbreaks.

Two of the strains from the earlier outbreaks had been incorporated in most of the vaccines that were available at the time.

From these experiences it seems that the problem of influenza vaccination at the present time is by no means entirely solved. It also appears that unless the recent occurrences of influenza A were spurious or sharply limited, no widespread epidemic of either influenza A or B is to be anticipated in this country during the present winter. However, as pointed out in Dingle's review, further observations are necessary to test the validity of the theory of the periodicity of influenza, particularly in view of the antigenic differences among influenza viruses of the same type. Additional large-scale studies of the efficacy of influenza vaccination are also needed both in view of these differences and because of other factors concerned with the protective value of various types of vaccines.

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"AN ADVENTURE IN CO-OPERATION"

The sixth annual New England Postgraduate Assembly, held on the last three days of October, 1947, at the Copley Plaza Hotel in Boston and sponsored by the medical societies of the six New England States, broke all previous records for attendance. Over 700 physicians from Eastport, Maine, to Stamford, Connecticut, were registered, in addition to one each from California, Illinois and New Jersey, eight from New York and six from Canada. The program, previously announced to the medical professicn of this section through the medium of these pages, was well selected and varied; the speakers, coming from major medical centers of the country, delivered their addresses ably and were appreciatively welcomed.

The dinner speaker on October 30, Dr. George Baehr, president of the New York Academy of Medicine, presented his views on the continuing education of physicians to an audience of nearly one hundred and fifty. Dr. Baehr emphasized the changes that thirty years of scientific discovery have made in the training of the physician, dwelling particularly on the point that success in private practice can no longer be accepted as the criterion for a teacher. The quickened step of time in its march must be matched with new standards on our part — full-time clinical hospital chiefs, improvements in rural hospitals and a greater awareness of the responsibilities they owe to their communities, private-practice groups designed to fit in with the facilities of the community hospital and plans for prepaid medical care that are just rather than compulsory.

The real contribution of the Assembly, however, was the assurance it gave of success in the co-operative venture upon which the state medical societies of New England have embarked. Many of our problems are similar, and we can bring our varied experiences with them to bear on their solution. Others are unique for the background against which they are viewed, whether of rural Vermont or of industrial Rhode Island, and we can enrich our own knowledge by a little intermingling of it with that of our neighbors.

This desire for mutual improvement without other than healthy competition reflects the best of our sectional heritage and our pride in the particular homeland that we inhabit. Even as we take counsel with ourselves, however, to better our opportunities and improve our professional output, we are conscious of no antagonism to other sections of the country less fortunate than New England. Rather are we willing to share our benefits; to accept a moral and intellectual leadership, if necessary, to leaven the whole loaf.

MASSACHUSETTS MEDICAL SOCIETY

BUREAU OF CLINICAL INFORMATION

All secretaries of various medical groups, such as special societies and alumni associations, are requested to notify the Bureau of Clinical Information regarding scheduled meetings, annual dinners and so forth. If such data are on file, it is hoped that duplication of dates can be avoided.

DEATHS

AVEDISYAN — Avedis D. Avedisyan, M.D., of Boston, died on November 16. He was in his seventy-fifth year.
Dr. Avedisyan received his degree from Tufts College Medical School in 1896.
His widow and a sister survive.

BEAN — Charles F. K. Bean, M.D., of Medford, died on July 23. He was in his sixty-third year.
Dr. Bean received his degree from Harvard Medical School in 1912. He was formerly house officer of the Malden Hospital and was later a member of the surgical staff of the Lawrence Memorial Hospital, Medford, as well as a censor and councilor of the Massachusetts Medical Society. He was a fellow of the American Medical Association.
His widow survives.

DELANO — Samuel Delano, M.D., of New Britain, Connecticut, died on November 8. He was in his ninetieth year.
Dr. Delano received his degree from Harvard Medical School in 1883.

HENDERSON — Francis F. Henderson, M.D., of Milton, died on November 20. He was in his sixty-second year.
Dr. Henderson received his degree from Tufts College Medical School in 1911. He was surgeon-in-chief, Fourth Surgical Service, Boston City Hospital, and a fellow of the American Medical Association.
His widow, two brothers and a sister survive.

SIBLEY — Benjamin E. Sibley, M.D., of Brookline, died on November 19. He was in his seventy-fourth year.
Dr. Sibley received his degree from Harvard Medical School in 1905. He served for more than thirty years as chief medical officer for the Boston Elevated and Metropolitan Transit Authority and was formerly a member of the medical staffs of Liberty Mutual Insurance Company and Massachusetts Institute of Technology. He was a fellow of the American Medical Association.
His widow, two daughters, four grandchildren and a sister survive.

MEDICOLEGAL ABSTRACT

Hospitals — Whose servant is the intern? On the principle that a charitable institution should be just before it is generous, many states hold charitable hospitals liable for the negligent acts of their servants. No liability is imposed for negligent acts of such persons as physicians and technicians when the hospital has not been negligent in their selection or retention. Cases imposing liability have been those concerning employees such as elevator operators, ambulance drivers, ward attendants and ministerial and administrative workers. An interesting question arises concerning the exact status of an intern — a graduate physician, but usually employed by the hospital. A recent Tennessee case involved that problem.

A pay patient was admitted to a charitable hospital, where she underwent a serious abdominal operation at the hands of her own surgeon. Shortly after the operation the surgeon ordered the administration of a hypodermoclysis. This was administered by Dr. L., an intern in the employ of the hospital. In a suit to recover damages for the negligent administration of the hypodermoclysis the plaintiff alleged and testified that the injection on the right leg was made without the application of any preparation to the skin and without the use of gauze between the flesh and the needle; that this injection caused much pain and that forty to forty-five minutes elapsed from the starting of the flow until the return of the intern, and that during that time the area around the needle raised up a little; that the intern then removed the needle and administered a hypodermoclysis to the left leg, which was later without undue pain or untoward results; and that the place on the right leg continued to be painful and on the following morning was swollen and discolored and had a blister about the size of a silver dollar. The patient continued to suffer from this condition up to the time of discharge from the hospital and subsequently underwent a local operation on the right leg, which continued to cause great pain and suffering. A medical witness testified that if the solution had been pure and the equipment free of contamination and if the technic of the intern had been proper there would not have been any injury.

On a motion for a rehearing on appeal the attorneys for the hospital vigorously urged that even if the administration had been negligent the hospital would not be liable for the negligence of the intern. They relied largely on the language of Judge Cardozo in the case of *Schloendorff* v. *The Society of New York Hospitals* (105 N. E. 92) in which it was stated as follows:

> The second ground of the exemption is the relation subsisting between a hospital and the physicians who serve it. It is said that this relation is not one of master and servant, but that the physician occupies the position, so to speak, of an independent contractor, following a separate calling, liable, of course, for his own wrongs to the patient whom he undertakes to serve, but involving the hospital in no liability, if due care has been taken in his selection.

The Tennessee court accepted the fact that it was the duty of the intern to follow the orders of the attending physician but stated:

> A patient at the hospital is entitled to the generally accepted services of a hospital including the services of the intern. The intern can make no charge for his services. The patient has no voice in the selection of the intern. There is no contract between them. If the attending physician ordered a hypodermoclysis to be administered to a patient, it would be the duty of the intern to give it; it was a part of the services rendered by the hospital by virtue of the relation existing between it and the patient.

The court then cited with approval the holding of the Supreme Court of Florida:

> There can be no question but that a hospital is as much liable under the doctrine of respondent superior for the negligence of an intern who is in no wise an independent contractor, but a mere employee, as it is for that of a nurse under like employment.

It also cited the language of the Supreme Court of Virginia:

> The intern is not an independent contractor so far as the patient is concerned. The contract is with the hos-

> pital for his service. His service is a part of the numerous duties prescribed by the hospital, and he is selected, employed, directed, supervised and paid by the hospital. In rendering such services they act on behalf of their employer.

Judge Ketchum in dissenting relied largely upon the right to control the conduct of the person doing the wrong. He approved the reasoning of the *Schloendorff case*, saying:

> The hospital did not undertake to treat the plaintiff, or to furnish her with doctors or nurses, but merely furnished the room she occupied and the usual facilities of the hospital for treatment by her own physician and nurses. Dr. L., the intern who administered the hypodermoclysis, was a graduate physician who had been highly recommended to the hospital as a man fully qualified by reason of his education and skill to perform the duties of an intern; and in administering the hypodermoclysis he was acting under the directions of the plaintiff's own physician and not of the hospital. The hospital gave him no instructions in connection with the administering of the hypodermoclysis, which was an operation requiring the technical skill of an expert physician or nurse, and although it employed him as an intern it had no right to control or direct him as to the manner in which the operation should be performed.

Probably, this recent Tennessee decision does not lay to rest the question "whose servant is the intern?" Nor does it touch upon the problem of the status of the resident, in many hospitals a more advanced stage of internship. Is the intern his own master and solely responsible for his own negligence? Is he the servant of the hospital? If so, then the hospital may be liable. Or is he the servant of a private physician in charge, if any? If so, the physician in charge may be liable. The answer may vary in different states. In Tennessee, as a matter of law, the intern is an employee of the hospital and not the servant of the attending physician, and therefore any suit against the physician for the negligent acts of the intern would be unsuccessful. However, it is conceivable that the practice of the particular hospital regarding the supervision, control and direction of the work of an intern may be decisive. In view of the many decisions exempting hospitals from liability for the negligent acts of qualified specialists on the staff of the hospital, such as x-ray and surgical technicians, another state may well hold that an intern is in the same class as any other physician. (*Sepaugh* v. *The Methodist Hospital*, 202, S. W. [2d] 985, 1946.)

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

THE CHANGING CANCER DEATH RATE

During the twenty-one years of the Massachusetts Cancer Program there has been a yearly increase averaging 130 deaths. About 60 per cent of the increase has been among males and 40 per cent among females. However, when allowance for the aging of the population was made the rise was limited to the males, and there has been a downward trend among females. Not all types of cancer have contributed to this downward trend, for some have shown upward trends and others have been trendless. The mortality rates for cancer of the stomach, buccal cavity, skin, uterus and liver have downward trends. Cancer of the breast, larynx (female), vulvovagina, scrotum, bladder, esophagus, kidney (female) and rectum (female) showed no significant trend, whereas an upward trend obtained for all remaining organs. The most pronounced in the upward trend group was cancer of the respiratory organs.

The upward trend of individual sites among males was sufficient to give a total upward trend; among females, the downward trend of individual sites was great enough to make a total downward trend. The change in the trend noted in Massachusetts among females was followed a few years later by a similar drop in other states. The change in the adjusted cancer death rate offers speculation regarding the part that can be attributed to cancer-control activities and other circumstances.

HOMOLOGOUS SERUM JAUNDICE FOLLOWING BLOOD AND PLASMA TRANSFUSIONS

The risk of transmitting jaundice in plasma has been generally appreciated in this country since the outbreak of jaundice in the United States Army camps in 1942[1] was traced to plasma used in the preparation of yellow-fever vaccine. There have been numerous reports of this disease after blood and plasma transfusions in both Army and civilian practice.[2–4] It has also been transmitted by unsterile syringes at venereal-disease clinics.[5] More recent surveys in New York State[6] and England[7] showed attack rates of roughly 5 and 7 per cent, respectively. In Boston Scheinberg, Kinney and Janeway[8] and Moloney[9] have reported further civilian cases. These reports re-emphasize the necessity of weighing the immediate advantages of blood and plasma transfusion against a possible chance of a later attack of jaundice.

To facilitate follow-up studies, the State Biologic Laboratory issues an information card with each unit of blood and plasma distributed. The prompt return of this card with details of the patient's name and address and lot number of plasma used makes possible a check for immediate reactions, and is also the nucleus for a further follow-up study four to six months later. Such a study to ascertain the incidence of this disease in Massachusetts is now in progress under the auspices of the American Red Cross, the Harvard School of Public Health and the Massachusetts Department of Public Health.

Where cards have not already been sent in, hospitals are asked to assist the study with the relevant data.

References

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3. Homologous serum jaundice: memorandum prepared by Medical Officers of Ministry of Health. *Lancet* **1**:83-88, 1943.
4. Beeson, P. B. Jaundice occurring one to four months after transfusion of blood or plasma: report of seven cases. *J. A. M. A.* **121**: 1332-1334, 1943.
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6. Jaundice following plasma transfusion — recording of lot numbers essential. *Health News*, New York State Department of Health **24** (No. 15): 1947.
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8. Scheinberg, I. H., Kinney, T. D., and Janeway, C. A. Homologous serum jaundice: problem in operation of blood banks. *J. A. M. A.* **134**:841-848, 1947.
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COMMUNICABLE DISEASES IN MASSACHUSETTS FOR OCTOBER, 1947

Résumé

Diseases	October 1947	October 1946	Seven-Year Median
Chancroid	4	2	1*
Chicken pox	309	478	478
Diphtheria	21	83	17
Dog bite	886	991	842
Dysentery, bacillary	60	6	32
German measles	51	52	46
Gonorrhea	334	413	413
Granuloma inguinale	1	1	0*
Lymphogranuloma venereum	0	0	1*
Malaria	4	23	16
Measles	120	508	508
Meningitis, meningococcal	6	5	11
Meningitis, Pfeiffer bacillus	2	3	3
Meningitis, pneumococcal	2	2	2†
Meningitis, staphylococcal	0	0	0†
Meningitis, streptococcal	0	0	0†
Meningitis, other forms	0	0	6†
Meningitis, undetermined	2	4	3†
Mumps	374	175	326
Pneumonia, lobar	68	73	161
Poliomyelitis	66	128	54
Salmonellosis	14	10	10
Scarlet fever	274	196	456
Syphilis	322	390	408
Tuberculosis, pulmonary	248	247	236
Tuberculosis, other forms	19	19	19
Typhoid fever	8	3	4
Undulant fever	3	3	5
Whooping cough	461	554	555

*Three-year median.

†Five-year median.

Comment

Diseases above the seven-year median are bacillary dysentery, diphtheria, dog bite, German measles, mumps, poliomyelitis, salmonellosis, pulmonary tuberculosis and typhoid fever. However, in none of these is the rise sufficient to cause concern.

Diseases below the seven-year median are chicken pox, gonorrhea, malaria, measles, meningococcal meningitis, lobar pneumonia, scarlet fever, syphilis, undulant fever and whooping cough.

With 66 cases of poliomyelitis being reported for October, it seems evident that the peak was reached in September, when 149 cases were reported.

Although diphtheria is much below the prevalence of October, 1946, it still exceeds the seven-year median. In fact, only twice since 1935 has the October figure been so high. With the diphtheria season just beginning, a further increase can be expected in communities where immunization is not at a high level.

After a low year in 1946, following the epidemic prevalence in 1945, mumps has maintained an upward trend in 1947. This probably indicates that the disease will be prevalent during the coming season, with the usual peak in March or April.

Geographical Distribution of Certain Diseases

Diphtheria was reported from: Boston, 9; Cambridge, 1; Chelsea, 5; Dudley, 1; Foxboro, 1; Framingham, 1; Randolph, 1; Revere, 1; Somerville, 1; total, 21.

Dysentery, bacillary, was reported from: Chelsea, 3; Malden, 1; Waltham (Fernald State School), 2; Wellesley, 1; Worcester (State Hospital), 7; Wrentham (State School), 46; total, 60.

Hookworm was reported from: Templeton, 1; total, 1.

Lymphocytic choriomeningitis was reported from: Athol, 1; total, 1.

Malaria was reported from: Medford, 2; Woburn, 1; Worcester, 1; total, 4.

Meningitis, meningococcal, was reported from: Boston, 2; Newton, 1; Quincy, 1; Waltham, 1; Westfield, 1; total, 6.

Meningitis, Pfeiffer bacillus, was reported from: Wellesley, 1; Worcester, 1; total, 2.

Meningitis, pneumococcal, was reported from: Cambridge, 1; Lawrence, 1; total, 2.

Meningitis, undetermined, was reported from: Springfield, 1; Worcester, 1; total, 2.

Poliomyelitis was reported from: Attleboro, 1; Boston, 3; Cambridge, 3; Chelsea, 1; Chicopee, 1; Concord, 1; Dedham, 1; Easton, 2; Everett, 1; Falmouth, 1; Fitchburg, 2; Gloucester, 1; Lawrence, 1; Leominster, 1; Lynn, 7; Malden, 1; Manchester, 1; Medfield, 1; Medford, 2; Melrose, 1; Middleboro, 1; New Bedford, 1; Newton, 4; Quincy, 3; Revere, 2; Saugus, 1; Springfield, 2; Stoughton, 1; Swansea, 1; Taunton, 1; Wakefield, 2; Waltham, 1; Watertown, 1; Wellesley, 7; Williamsburg, 1; Woburn, 1; Worcester, 3; total, 66.

Salmonellosis was reported from: Ayer, 1; Beverly, 2; Boston, 2; Chelsea, 3; Ipswich, 1; Lowell, 1; Marshfield, 1; Melrose, 1; Winchester, 1; Worcester, 1; total, 14.

Septic sore throat was reported from: Boston, 1; Greenfield, 1; Haverhill, 2; Melrose, 1; total, 5.

Trichinosis was reported from: Arlington, 1; Boston, 3; Lakeville, 1; Middleboro, 1; Plymouth, 1; total, 7.

Tularemia was reported from: Holyoke, 2; total, 2.

Typhoid fever was reported from: Chelsea, 1; Clinton, 4; Everett, 1; Orange, 1; Worcester, 1; total, 8.

Undulant fever was reported from: Brimfield, 1; Clinton, 1; Woburn, 1; total, 3.

MISCELLANY

AMERICAN MEDICAL DIRECTORY

Cards are being sent to all physicians in the United States, its dependencies and Canada requesting information to be used in compiling the new *American Medical Directory*. This eighteenth edition, the first since 1942, has been long delayed on account of wartime restrictions and the shortage of paper and labor.

Its completeness and accuracy are obviously of vital importance. Any physician who had failed to receive a card by December 1 is urged to write at once to the Directory Department of the American Medical Association, requesting a duplicate.

AWARD TO COLONEL MOORE

Colonel Merrill Moore, of Boston, was awarded the Chinese decoration, Yen Hui Special Class, on Saturday, November 1, at a ceremony held at the quarters of Lieutenant General Albert C. Wedemeyer, formerly commanding general, United States Forces, China Theater, at Fort George G. Meade, Maryland. The decoration was awarded in recognition of outstanding and meritorious service during 1946 while Colonel Moore was on duty as surgeon to the Nanking Headquarters Command. General Peter Pi, military attaché to the Chinese Embassy in Washington and formerly aide to the Generalissimo, read the citation. The presentation was made by General J. L. Huang, of the Chinese Army, who was a classmate of Colonel Moore at Vanderbilt University. Colonel Moore had served with distinction in the South Pacific Theater in 1942-1944 and in the Philippines in 1945 prior to his assignment to the China Theater.

BOOK REVIEWS

Handbook of Correctional Psychology. Edited by Robert M. Lindner, M.D., and Robert V. Seliger, M.D. 8°, cloth, 691 pp. New York: Philosophical Library, 1947. $10.00.

This book is a veritable safety deposit vault of valuable information. Forty-six experts have co-operated, under the editorial guidance of two able scientists, to bring together the most up-to-date and progressive opinions available concerning the application of psychology to the problem of correcting behavior difficulties. Anyone interested in good government will find this volume worth reading. Its point of view is very broad, but particular problems are given specific attention in the light of common knowledge shared by modern psychiatrists. This is a book that the psychiatrists or social workers will find informative and helpful.

The Development of Modern Medicine: An interpretation of the social and scientific factors involved. By Richard Harrison Shryock. 8°, cloth, 567 pp., with 9 plates. New York: Alfred A. Knopf, 1947. $5.00.

The book, long out of print, was first issued in 1936. It now appears in an enlarged and revised form, brought up to date. The author, a competent general historian, is the leading lay authority on the form of modern medicine now practised in the United States. This thoughtful monograph was widely proclaimed when first published as the best summary of the historical development of medicine in print. The new edition is equally satisfactory. The author handles the more recent controversial matters, such as the programs for socialized practice, the stand taken by the American Medical Association and the pending bills for federal legislation of compulsory health insurance, with great clarity of thought, without aligning himself with any one of the proposals. A particularly well written chapter deals with psychiatry and the impact of Freud on the advance against mental disease. Fully annotated and with a good index, the finely printed volume is a credit to both author and publisher. It is an authoritative text, and the new impression is a welcome addition to the medical literature of our times.

BOOKS RECEIVED

The receipt of the following books is acknowledged, and this listing must be regarded as a sufficient return for the courtesy of the sender. Books that appear to be of particular interest will be reviewed as space permits. Additional information in regard to all listed books will be gladly furnished on request.

Hospital Care in the United States: A study of the function of the general hospital. Its role in the care of all types of illness, and the conduct of activities related to patient service, with recommendations for its extension and integration for more adequate care of the American public. 8°, cloth, 631 pp., with 94 tables and 58 charts. New York: The Commonwealth Fund, 1947. $4.50.

Diseases of the Gallbladder and Allied Structures: Diagnosis and treatment. By Moses Behrend, M.D., consulting surgeon, Jewish Hospital and Mt. Sinai Hospital, and associate in surgery, Jefferson Medical College. With a foreword by Thomas A. Shallow, M.D., Samuel D. Gross, professor of Surgery, Jefferson Medical College. 8°, cloth, 290 pp., with 110 illustrations. Philadelphia: F. A. Davis Company, 1947. $7.00.

The Engrammes of Psychiatry. By J. M. Nielsen, M.D., associate clinical professor of neurology and psychiatry, University of Southern California School of Medicine, and senior attending physician (neurology), Los Angeles General Hospital; and George N. Thompson, M.D., assistant clinical professor of neurology and psychiatry, University of Southern California School of Medicine and psychiatric consultant, Department of Corrections, State of California. 8°, cloth, 509 pp., with 28 illustrations. Springfield, Illinois: Charles C Thomas, 1947. $6.75.

Neuropathology in its Clinicopathologic Aspects. By I. Mark Scheinker, M.D., assistant professor of medicine (neurology) and instructor in neuropathology, University of Cincinnati College of Medicine, and neuropathologist and attending neurologist, Cincinnati General Hospital. With a foreword by Tracy J. Putnam, M.D., professor of neurology and neurologic surgery, College of Physicians and Surgeons, Columbia University, and director of services of neurology and neurologic surgery, Neurological Institute of New York. 8°, cloth, 306 pp., with 208 illustrations. Springfield, Illinois: Charles C Thomas, 1947. $6.75.

NOTICES

ANNOUNCEMENTS

Dr. Robert L. Mason has returned from military service and is resuming the practice of surgery at 47 Bay State Road, Boston.

Dr. Francis Rouillard announces the removal of his office for the practice of obstetrics and gynecology to 1180 Beacon Street, Brookline.

JOSEPH H. PRATT DIAGNOSTIC HOSPITAL

Bennet Street, Boston

Lecture Hall, 9-10 a.m.

MEDICAL CONFERENCE PROGRAM

Wednesday, December 10 — The Clinical Significance of Hyperlipemia. Dr. Robert Holden.
Friday, December 12 — Exophthalmos and Proptosis. Dr. Parker Heath.
Wednesday, December 17 — Clinicopathological Conference. Drs. James M. Baty and H. E. MacMahon.
Friday, December 19 — Gastritis. Dr. Seymour Gray.

On Tuesday and Thursday mornings from 9:00 to 10:00 Dr. S. J. Thannhauser will give medical clinics on hospital cases. On Friday afternoons from 2:00 to 4:00 therapeutic conferences will be held with round-table discussion, Dr. R. P. McCombs, Moderator. On the second and fourth Friday afternoons of each month, Dr. Merrill Sosman will conduct x-ray conferences from 4:00 to 6:00. On Saturday mornings from 9:00 to 10:00, clinics will be given by Dr. William Dameshek. Medical rounds are conducted each weekday except Saturday by members of the Staff from 12:00 to 1:00.

All exercises are open to the medical profession.

There will be no conferences from December 24, 1947, to January 3, 1948, inclusive.

TUFTS ALPHA OMEGA ALPHA

The Tufts chapter of the Alpha Omega Alpha will meet in the auditorium of the Beth Israel Hospital on Wednesday, December 10, at 8:30 p.m. Dr. Richard H. Overholt will speak on the subject, "The Mechanics of Treatment in Pulmonary Tuberculosis."

GREATER BOSTON MEDICAL SOCIETY

A meeting of the Greater Boston Medical Society will be held in the auditorium of the Beth Israel Hospital on Tuesday, December 16, at 8:15 p.m. A symposium on recent advances in endocrinology will be presented.

PROGRAM

The Use of Thiouracil Derivatives in the Treatment of Thyrotoxicosis. Dr. Mark F. Lesses.
Radioactive Iodine in the Treatment of Thyrotoxicosis. Dr. Saul Hertz.
Adrenal Insufficiency. Dr. Kendall Emerson.
Retarded Adolescence. Dr. Nathan B. Talbot.

HELEN PUTNAM FELLOWSHIP

The Helen Putnam Fellowship for advanced research in the field of genetics or of mental health will be offered by Radcliffe College for the academic year 1948-1949.

This fellowship, carrying a stipend of $2000 for an eleven-month period and beginning October 1, 1948, is open to mature women scholars who have their doctorate or equivalent qualifications, and who have research in progress.

Applications should be submitted to Radcliffe College not later than April 1, 1948. The appointment will be announced on approximately May 1, 1948.

(Notices continued on page xiii)